

DAILY METAL REPORTER

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By H. T. WILDER

Manager of Distribution, Aluminum Co. of America

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Chairman, Rhodesian Selection Trust Limited

BRITISH METAL MARKETS

By L. H. TARRING

London, England

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U. S. METAL IMPORT DUTIES

WASHINGTON REPORT

METAL STATISTICS

DECEMBER

1957



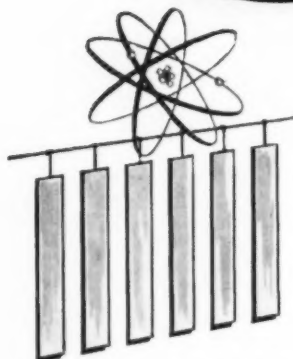
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Two LINE Editorials

One of the missile experts says that by 1962 the United States will be sending visitors to other planets. If they guarantee not to make it a round trip, we would like to suggest some prospective passengers.

Any day now you can expect to hear of the development of an anti-anti-missile missile, to be used against the anti-missile missile which has already been announced for use against the atomic missile.

One of our experts asserts that the Russians' satellite is "already obsolete." Wonder how long it will be before they are selling those old obsolete Sputniks in antique shops?

After all, if the Russians really wanted to get rid of Gen. Zhukov, wouldn't it have been easier to send him up in Sputnik II instead of that poor dog?

Italian engineers predict that the Leaning Tower of Pisa will fall over in 2151. This is a catastrophe we intend to start worrying about not sooner than 2150.

METALS

wishes you
A Merry Christmas
and
A Happy New Year

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BUSINESS IN MOTION

To our Colleagues in American Business . . .

"Printed circuits!" "Printed circuits!" You hear it on all sides today. And well you might. For printed circuits have so many advantages. They have compactness as compared to conventional wiring and compactness that makes possible better assembly arrangements and techniques. Numerous, time-consuming hand operations are eliminated, there are fewer rejects, shorter, less intricate assembly lines, and fewer soldering operations, as with printed circuits a single dip-soldering operation can solder all joints at once.

Revere, naturally, has been interested in printed circuits from their very inception. So Revere Research Engineers immediately went to work to perfect a copper that would meet all of the rigid requirements encountered in manufacturing printed circuits as well as those necessary to their efficient operation. Accordingly, they set up these rigid specification standards: there can be no peaks or valleys. Surface must be hard and of uniform density through and through and side to side to maintain positive conductivity throughout the circuit. Also, a hard surface permits resist to clean off easily as there are no pores to hold resist and cause trouble later when soldering. Even the most closely spaced and finest lines encountered in a printed circuit must have a sharp definition of the edges and be freer from pits, pinholes and imperfections.

Also, the copper must be free from oxidation as it comes from the mill and without lead inclusions,

present a sufficiently clean surface so that fluxes will wet readily and when automatically soldered the solder coat will be uniform every time . . . free of skips or bald spots. Copper-to-laminate bond strength must be uniform and adequate. Revere Rolled Copper also shall exceed standard specifications as well as meet ASTM B5 specification for purity with a 99.9% minimum rating.

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Washington Report



December 10, 1957

THE U. S. Tariff Commission was the target of a barrage of words and statistics as the battle over higher import duties and quotas for lead and zinc reached a climax at hearings during the month in review. All points of view, including those of mine producers, smelters, importers, consumers, labor, Congressional leaders, and foreign interests, were on the firing line during the week of hearings which began November 19. When the smoke cleared the Tariff Commission announced it would accept briefs until December 10, the day this report was being written.

Even if the Commission recommends new tariffs, as it is expected to do, they are not likely to go into effect before the end of January or early February.

The recommendations would go to the new Trade Policy Committee, consisting of the Secretaries of State, Treasury, Defense, Interior, Agriculture, Commerce and Labor, for review by this Cabinet-level group before going to the President. By executive order the President could then put all or any part of the Commission's recommendations into effect. It is anticipated in some quarters there would be a grace period before any tariff changes would become effective.

If the Commission's recommendations are similar to those it made to the President in 1954 (namely a 50 per cent hike in the duty rates that prevailed on January 1, 1945) the new tariffs would be 2.10c a pound on slab zinc, 2.55c a pound on pig lead, and 1.80c a pound on the concentrates of each metal. Most industry quarters that favored the maximum legal increase in the duties, pointed out that the relief so afforded would not be sufficient to aid the domestic mining industry and that import quotas should be established for both lead and zinc.

Proposed Import Quotas

Under the system proposed by the Emergency Lead-Zinc Committee, import quotas would be set on a quarterly quota or a quarterly ceiling, whichever is lower, on both metals. The quotas would be based on the difference between the domestic consumption and the domestic mine production of both metals, plus secondary metal, for the second quarter preceding the quarter for which quotas are being fixed. The quarterly ceiling for lead would be 60,000 tons and 100,000 tons for zinc.

The ceilings would not apply for each metal when the price of pig lead exceeds 17.00c a pound or when slab zinc climbs above 14.50c a pound, in which case the quarterly quota for each metal would control. The committee asked that no more than 25 per cent of any effective quota under

the system be used for entries of either lead metal or zinc metal. Because of the "heavy stocks of metal and concentrates . . . which (now) overhang the domestic market," the committee suggested that the proposed 1958 quarterly ceiling for zinc be reduced to 80,000 tons.

Pro and Con Arguments

Those in favor of higher tariffs and/or import quotas cited the injury suffered by the domestic industry, the rise in unemployment in mining areas, and the need to maintain a strong U. S. industry for national defense.

Those against higher tariffs and/or quotas cited the injury which could be caused friendly nations who are major suppliers of these metals to the U. S., the increased costs which would be borne by U. S. consumers, and the impracticability of the proposed programs.

An important segment of the domestic mining industry that backed higher import duties went on record against import quotas, on the grounds that any such system would eventually make complete Government control necessary if equitable distribution is to be made to both producers and consumers.

Nickel Duties in News

Nickel duties also made the news during the month in review. Supplemental export quotas and relaxations of licensing restrictions and requirements on further nickel-bearing commodities in the 1957 fourth quarter were announced by the Department of Commerce on November 21. The action by Commerce reflected improved domestic supplies of these items. A supplemental quota of 500,000 pounds each was set for copper nickel alloy scrap containing 40 per cent or more copper and 5 per cent or more nickel, and for nickel copper alloy scrap. The originally-established 50,000-pound quota for pure nickel powder, cast and rolled nickel anodes,

and nickel and nickel alloy shot, was increased another 200,000 pounds.

In Washington a conflict of views was reported among Administration agencies over suspension of the 1.25c a pound import duty of metallic nickel. The State Department was said to be in favor of granting the President power to suspend the nickel duty as a possible compensatory action for Canada which would be adversely affected by the anticipated boost in U. S. tariffs on lead and zinc. Suspension of the duty reportedly was opposed by the Justice Department and the General Services Administration. Justice contended removal of the duty would retard development of an independent domestic nickel industry. GSA is opposed to the action because it would lower the sales value of its plant at Nicaro, Cuba, which produces unrefined metal which already enters the U. S. duty-free.

It also was disclosed here that President Eisenhower will ask Congress to grant him authority to reduce tariff rates by a total of 25 per cent. The Administration, in discussing renewal of the Trade Agreements Act, proposed that authority to enter trade agreements be extended for five years from the date of its expiration on June 30, 1958, and that the President be authorized to reduce any rate of duty existing on July 1, 1958, as follows: by 5 per cent of the duty annually for five successive years, or reduce a duty by this same total amount over a three-year period if no yearly reduction exceeded 10 per cent of the duty; by three percentage points ad valorem, without any yearly reduction exceeding one percentage point; to 50 per cent ad valorem, if an existing duty is in excess of that amount.

Aluminum Industry Growth

Representatives of the Big Three domestic aluminum producers — Aluminum Co. of America, Reynolds Metals Co., and Kaiser Aluminum & Chemical Corp. — painted a bright future of the aluminum industry at a hearing of a House Small Business subcommittee during the month in review.

Donovan Wilmot, Alcoa vice president, said that despite the current overabundance of primary aluminum, his company is spending approximately \$160,000,000 on additional basic aluminum production facilities this year and has programmed \$80,000,000 for similar expenditures in 1958. Wilmot said the industry's immediate job is to increase applications of aluminum.

Joseph H. McConnell, general counsel for Reynolds, told the House group that the U. S. will be using 10,000,000 pounds of aluminum a year by 1965 compared with a current annual rate of less than half that amount. He said annual domestic use should reach 6,800,000,000 pounds by 1960. McConnell stated total U. S. aluminum supply has increased from 2,400,000,000 pounds in 1950 to 4,670,000,000 pounds currently, or an increase of 95 per cent.

D. A. Rhoades, Kaiser vice president, said the future of the aluminum industry over the next several years

(Continued on Page 19)

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DOMESTIC ALUMINUM CONSUMPTION IN 1965 PLACED AT 4½ MILLION TONS OR DOUBLE USE DURING 1955

Rapid Expansion of Existing Markets and Development of New Ones Seen Reflecting Population Growth, Favorable Prices and Metal's Advantages

By H. T. WILDER, Manager of Distribution, Aluminum Company of America

SINCE last fall, of course, one very significant development has come about — aluminum production, after a decade of tight supply, has caught up with demand in a big way. Curiously enough, this is a coin with two sides. On the one hand, it means more scrambling for sales. I'm sure I don't have to point that out to this group. There is no feeling in the industry, however, that an ample supply of metal is in itself an undesirable condition. On the contrary, it seems to be just what the doctor ordered — providing the medicine doesn't choke the patient!

Before developing that point, though, I'd like to mention an interesting economic aspect of what we've seen in 1957. Those of you who have been in the industry as long as I have, which by the way is 38 years to-day, know that the industry is not immune to setbacks of a temporary nature. The drop in housing starts, automobile production and other durable goods from 1955 levels, higher cost of money, all have been responsible for the slackening of demand of many things including aluminum.

Does this mean aluminum is losing its position? I think not. Instead — and this is the other side of the coin I mentioned a moment ago — it actually means that we are making steady progress in our efforts to increase and intensify the use of aluminum in individual applications. This must be the case because we've been holding our own fairly well tonnage-wise in the overall market at a time when unit output of many significant applications has been at a reduced level. This could well be a long-pull gain.

Current Availability

But getting back to the current availability of metal. For many years now, important potential markets for aluminum have not been fully exploited because of uncertainty that metal would remain available. In an effort to overcome this situation, the aluminum industry has gone through one round of expansion after another. Yet except for a few short intervals, demand continued to outstrip supply.

The present surplus of metal, then, is actually a healthy sign. It means

that many more designers and fabricators, confident of the availability of aluminum, will now feel free to capitalize on the natural advantages of the lightweight metal.

This factor, as I believe was mentioned a year ago — this ample supply of metal — is considered by everyone in the industry to be the key to future market growth. With more primary ingot capacity being added next year, we feel confident that we are approaching a new period of dynamic market expansion — the kind of activity that has made aluminum an outstanding growth industry.

Projected Demand

Well, you may say, this sounds fine as a broad generality. It paints a glowing picture. But what is total demand expected to be in 1965? And what makes the industry so confident it will materialize?

Let me say first that average industry estimates for 1965 have not changed appreciably from those made last year. Though there is some variation, the generally accepted figure for total domestic consumption is still about 8.5 billion pounds or 4¼ million tons for those of you who think tons sound bigger. This means the market will have at least doubled in ten years from the roughly 2 million tons consumed in 1955. In the aluminum industry, I would like to point out this is considered just par for the course! Consumption of aluminum has at least doubled in every decade since it first appeared on the market in 1888.

In this connection, I'd like to mention that a recent University of Illinois Bulletin gives added support to this estimate of future demand. The report is entitled "The Demand for Aluminum: A Case Study in Long-Range Forecasting." It is particularly interesting because the author uses three different approaches to the problem of forecasting the demand for aluminum in 1965 — two statistical methods (Trend Projections and Correlation Analysis), together with a survey of the outlook for aluminum products that make up total demand.

Statistical Surveys

Results of the two statistical methods coincide very well — 8.5 billion pounds for one, and 8.4 billion pounds for the other. The result of the third approach is only 5 per cent higher at 8.9 billion pounds. This difference, according to the author, is easily accounted for by the natural optimism of those reporting expected consumption of their particular products.

This study in statistical economics

was done by a graduate student at the University of Illinois. Since it was made independently by a non-industry man, I think you'll agree it offers added weight — if any is needed — to the projections made by the industry itself.

Assuming that the industry's projected demand is reasonably accurate, then, the big question is: How will this expanded market situation develop? Of the many answers that come to mind, three major ones stand out: (1) population growth, with parallel growth in the general economy; (2) industry factors that give aluminum advantages over competing materials, and (3) inherent advantages of the metal itself. Together, these three factors will lead to the rapid expansion of existing markets and the development of whole new markets. In the years ahead, applications once considered impossible or impractical will become everyday reality.

Population Growth

The first point—population growth—needs little amplification. Today, we are a nation of approximately 170 million. By 1965, this figure is expected to be upwards of 190 million—with the real boom coming in the years 1960-65. This represents a spurt of 20 million new consumers in only ten years. We are in the midst of a veritable population explosion.

The huge crop of children born during the war years is now approaching the 20-year age bracket. Since this is close to the median age for marriage, beginning around 1960 the number of new families should begin to grow by leaps and bounds. Experts estimate that the formation of households will rise from about 48 million per year in the spring of 1955 to more than 50 million by 1960 and between 61½ million to 67½ million in the period from 1960-75. One source says that in the 70's, there will be twice as many new homes built per year as were built in 1957.

With this development, you can look for a parallel increase in demand for automobiles, furniture, appliances, tools, sporting equipment, and a host of other consumer goods, to say nothing of the aluminum possibilities in the dwelling itself. Not only that, but if current trends are continued, the standard of living will continue to go up. From all indications, demand for goods and services will be unprecedented — and, gentlemen, if we do our jobs, our favorite metal will be right in the middle of this dra-

Excerpts of address at meeting of National Association of Aluminum Distributors, Camelback Inn, Phoenix, Ariz., November 1, 1957.

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matic, economic expansion. And our job, I might add, is basically simple: all we have to do is persuade the young people of tomorrow to trade their dollars for products made of aluminum.

Government Spending

All this, of course, is based on the hope and practical expectation of continued world peace. And this raises another question: what effect will the resultant decrease in government military spending have on future consumption of aluminum? While this situation could lead to temporary downward adjustments, it seems reasonable to expect that the net result will actually be favorable. After all, smaller military expenditures should channel more money into civilian areas of spending.

And I for one am still old-fashioned enough to believe that when it comes to spending his money, Mr. John Q. Public can do a better job than if he gives it to Uncle Sam as taxes and lets Uncle Sam spend it. Will this mean more aluminum sales? Again I repeat, it will, if only we work at our jobs.

Industry Factors

The second basic factor that virtually assures a doubling of aluminum consumption by 1965, are the industry factors that play an important part in aluminum's competitive position. Here I have in mind, particularly, the favorable price history, the prospect of a plentiful supply in the years ahead, and the outstanding research and development that have become synonymous with this business of making and selling aluminum.

Although the rising cost of materials and labor has forced a number of advances in price since World War II, with the exception of magnesium, aluminum has remained cheaper than other nonferrous metals, either on an actual weight basis, or on a volume basis, or both. Percentage-wise it has not increased as much as steel.

Price Advantages

Initially, the principal price advantage of aluminum, of course, is the fact that it weighs only about 1/3 as much as most other metals. Actually, though, aluminum results in other price advantages such as savings in transportation costs, reduced maintenance, higher payloads, less steel framing and foundations when used in buildings, lower production costs and in other important ways. For example, in the Alcoa Building in Pittsburgh, it is estimated that 30 to 50 per cent less steel framing was required than with standard masonry construction — a saving of 3,000 tons of steel, or more.

The supply outlook for aluminum, as I've already pointed out, is also a positive factor in the growth of demand. This sounds a little like a new economic principle facetiously formulated by one of our British friends a short time ago. Called "Parkinson's Law," it says in effect that work increases in direct proportion to the people available to do it. The effect of a plentiful supply of metal in the years ahead seems to me to follow this principle pretty well. If our experts are right, it may well prove to be a major factor in the need for future expansion to keep up with projected demand. An assured supply of metal

is certain to open up new markets. For that reason, Alcoa and other basic producers are planning increased aluminum production in the years ahead. This assurance of adequate supply is bound to be an encouraging element in stimulating the growth of industry markets.

Research and Development

Favorable price and supply factors, pointing as they do toward broader applications for aluminum, are backed up by outstanding efforts in research and development. These twin activities teamed with enthusiastic, imaginative sales programs have been largely responsible for the growth of the industry to date. In my own company, our sales development group, working closely with research, has frequently been able to create whole new markets for aluminum. The monocoque construction of trailer vans is one good example.

A vast range of new possibilities exists, and we firmly believe that broad areas of application remain unexplored. As the aluminum industry moves forward, a great deal will depend on the resources of our research and development organizations. Again, we are confident that they will continue to have outstanding success in applying aluminum's amazing properties to the practical needs of tomorrow's consumers.

Metal's "Universality"

Phenomenal growth in population and an industry well equipped to meet competition — these are dominant factors in continuing optimism about the future. Added to them, however, is a third and equally important factor — the characteristics of the metal itself. The word "versatility" is often used as a descriptive term. But aluminum's adaptability to such a wide range of applications suggests another word — "universality." Users of competitive materials are aware of this too, for more and more fabricators of other metals are climbing aboard the aluminum bandwagon.

With an assured supply, this universality of aluminum will without a doubt pace the growth of new markets and the expansion of existing ones. Stimulated by active research and development, plus intense merchandising effort, markets such as the building industry, transportation, consumer durable goods, machinery and equipment, the electrical field and containers and packaging will experience rapid growth.

Take the transportation industry, for instance, which includes aircraft, automotive, railroad and marine applications. Though already one of the two leading markets, transportation offers tremendous potential for increased applications of aluminum for reducing dead weight with resultant increase in efficiency and greater comfort.

Automotive Industry Usage

One outstanding example of this principle is the automotive industry where aluminum is used for trucks and buses. In the case of large semitrailers, for example, highway weight limitations make it imperative that extensive use be made of aluminum to reduce dead weight thereby increasing payload. The same principle applies in the Greyhound Scenicruiser,

where the use of three tons of aluminum permits each bus to carry 20 additional passengers with no increase in operating cost.

The largest potential for aluminum in the transportation field, however, is in the passenger car market. Now that an adequate supply of metal is available, Detroit designers can let their design imaginations run rampant. In the future, we'll continue to have such aluminum components as pistons, decorative trim, automatic transmissions and more power equipment. Beyond these, however, you can write your own ticket. I am sure that we can look for an increasing use of aluminum in new models. What is the potential of the automotive field? The Cadillac Eldorado Brougham has some 255 pounds of aluminum per unit while the national average is about 40 pounds. Surely these figures demonstrate the tremendous possibilities. You may have seen the article in the October issue of *Modern Metals* where Mr. H. F. Barr, Chief Engineer of Chevrolet makes the prediction that the automobile industry will average 75 pounds per car by 1965. This alone would generate 600 million pounds per year.

Construction Field

In the building and construction field, we find the same general picture of great market potential. The inherent advantages of the metal combined with finishes in a wide range of colors and textures are stimulating architects everywhere to design in aluminum. The demand for curtain-falls — initiated by our own 30-story Alcoa Building — will continue to find enthusiastic acceptance in commercial and industrial buildings. The market for roofing, insulation, windows, doors, hardware, rain-carrying equipment and a host of other functional and decorative building applications will likewise grow tremendously. A doubling of this market by 1965 also appears to be a conservative estimate.

In the residential building field lies a virtually undeveloped market for a metal with the universality of aluminum. In the recently announced Alcoa Care-Free Home, architects and homeowners alike can now see a dramatic demonstration of the happy results and almost limitless applications of aluminum in American homes. I am not nearly as familiar with the homes developed by others, but they undoubtedly offer many interesting applications, some of which are bound to stick.

Other Developments

And this is not the end of the story by any means. All I can hope to do here today is sketch in the broad trend — a few highlights. Rapid developments are going on in the rail, aircraft and marine fields. The electrical field is right in the middle of our market thinking, too. Uses for aluminum already range from high-voltage high lines to transformer shields in radio and TV sets. In both communications and electronic equipment, the trend is toward aluminum. With the electronics industry a key to more and more automation, the signs are easy to read.

Machinery and equipment, consum-

(Continued on Page 13)

LARGE COPPER PRODUCERS OF WORLD CAN RESTORE MARKET STABILITY BY CUTTING BACK PRODUCTION

Consumption of Red Metal at Current Price Levels Will Be Stimulated and Should Assure for Industry Continuation of Its Historical Growth Factor

By SIR RONALD L. PRAIN, O.B.E., Chairman, Rhodesian Selection Trust Limited

UP to March, 1956, the copper industry of the world had for many years enjoyed a period of unprecedented prosperity. This was based on an uninterrupted demand for copper arising from major schemes of reconstruction and development put in hand after the war, of military requirements in particular caused by the Korean War, and by governmental stockpiling policies.

These cumulative developments had combined to create a shortage in supplies, with the inevitable consequence of a price increase. The resulting prosperity was not viewed by all without serious misgivings about the future; in the short run the possibility of a severe reaction, in the long run the loss of many of copper's traditional uses.

Oversupply

The same shortages and high prices caused both public and private expenditure on the development of new mines, many of which have come into production in the last two years. It is this feature which has reversed the trend and the copper market is at present in a condition of oversupply. The inevitable price reaction has occurred with a speed and severity which has surprised most observers.

I have dealt at the beginning of this statement with the short history of the copper business in the last few years. It will be expected of me that I should give some expression of opinion on the future outlook.

Outlook

The short-term outlook has seldom been more confused and he would indeed be a rash man who ventured to express a view as to what course the copper market might take during this financial year. Not only are normal copper market considerations involved but, on this occasion, we are concerned with greater and more general world tendencies, which are affecting other commodities and may affect the general level of world trade.

It is more permissible to take a long view, and indeed the mining business consists, and always has consisted, in the taking of the forward view. On this basis I feel that the fall in the price of copper which, as I said earlier, has surprised most observers by its severity and speed and which

may cause the industry many short-term problems, may on the other hand be a blessing in disguise. Just as at high price levels we were concerned about the future of the industry, so at current levels there can be little doubt that the consumption of copper will be greatly stimulated and should assure for the industry the continuance of its historical growth factor.

Copper Price

The year ended June 30th, 1956, saw the turn of the copper market which had been on the increase more or less continuously since 1950. The price reached an all-time peak during March, 1956, and since then it has receded to about the level at which the rise began. The rise occurred over a period of 5 to 6 years, whereas the fall has occurred in a period of about 1½ years.

The basic reason for this transformation in the fortunes of the copper producing industry is quite simple, namely, that whereas the trend of consumption has been maintained throughout this period on a steadily rising scale, the supplies of copper on the other hand have increased very substantially. This in turn is due mainly to two factors; the first that there has been a greater absence of strikes in the main producing centres; the second, the bringing into production of the many new mines which have been developed either under the stimulus of the Korean War or on account of rising prices.

Supply and Demand

This turnabout in the statistical position, which had been foreseen for some time, has naturally affected the price of the commodity in accordance with the laws of supply and demand. Shareholders who have read my statements during the last two years will not have been surprised that there has been an inevitable reaction in the price. Nevertheless, the reaction, though foreseen, has been sharper than most observers in the industry would have cared to predict two years ago. Recent weeks have seen the price reach a point where some resistance appears to have been encountered. It is too early to say what may be the outlook for the next year. There are many factors of uncertainty in the situation, and many of these factors are not necessarily peculiar to the copper industry. In fact similar conditions have been experienced in other commodities.

It is important, however, in assessing the overall copper picture to

maintain some sense of proportion. It is well known that when copper was rising to unexpectedly high levels many sections of the producing industry viewed this rise with the greatest misgivings, partly because of the damage that might be permanently done to the development of copper as a commodity, and partly because of the danger that the reaction in price would be proportionately drastic. Now that this reaction has occurred, the converse must be true that present price levels do not constitute any threat to the future development of copper as an industrial material, and for this reason, correspondingly, one is justified in placing greater confidence in the long-term outlook for the commodity than was the position two years ago. We would expect, therefore, that copper will continue to reproduce its historic growth factor and that if this is so, the present imbalance between supply and demand should be corrected and the copper producing industry will continue to enjoy the development which has characterized it during this century.

Voluntary Output Curbs

There remains, however, one question which has exercised the minds of people concerned with this industry, whether as producers, consumers or shareholders in companies predominantly interested in copper. It must be presumed that it has also exercised the minds of the governments of those countries where copper plays an exceptional part in the national economy. This question is that of how to avoid the extremes of high and low prices which have characterized the last two years, and which in fact have been a feature of the copper industry in a lesser degree over a much longer period. Of the various suggestions which have been put forward on occasions in the past none appears to me to offer a better chance of stabilizing the position than for the larger producers of the world to impose on themselves from time to time some voluntary restriction of output. There is little that such producers can do to alter the pattern of demand, but there is much they can do to alter the pattern of supply by orderly curtailment when prices reach certain levels. If the majority of larger producers adopted this course the degree of curtailment necessary at the present time to balance the statistical picture might not be found to be unduly great.

We have shown where our opinion (Continued on Page 13)

Excerpts from chairman's statements for Rhodesian Selection Trust Limited and Mufulira Copper Mines Limited, circulated in advance of annual meetings at Salisbury, Southern Rhodesia, December 13, 1957.

U. K. INTERESTS BELIEVE FURTHER COPPER OUTPUT CUTS NECESSARY TO RESTORE CONFIDENCE IN METAL

Export Quotas Imposed by International Tin Council; Lead Easier With Supplies Plentiful; Zinc Prices Decline to Lowest Levels Since 1953

December 6, 1957

DURING the past month, copper price movements on the London market have not been very wide although the rally in the early part of the month on temporarily better Wall Street advices and a threatened strike at the Potrerillos mine (which has not materialized) was not maintained.

General sentiment regarding the copper price is not particularly strong here at the moment, but there is a greater disposition to believe that further falls are less probable and that if they occur they are likely to be limited in extent. A slightly apprehensive watch continues to be kept on the trend of economic activity in the United States as there are some fears that copper consumption there might recede if the general level of business activity does not soon begin to make a better showing.

Consumption Picture

As far as the U. K. is concerned the consumption picture, whilst not all that could be desired, is really not at all bad. In support of this contention, one can cite the figures for the first three quarters of the year which showed a total consumption of some 477,000 tons, or nearly 7,000 tons more than in the corresponding period of 1956. Although there has been some slowing down in building and general engineering activity, the motor-car industry in this country is operating at a high level, and appears to have quite good order books for the new season's models.

Another favorable development of significance, during the past month, has been a revival of Russian demand for copper wire with indications that the Soviet will probably take at least as much in 1958 as it has done in 1957. Since exports of wire from the U. K. this year have been at a high level, this is definitely encouraging news.

European consumers as a whole, however, are still inclined to the view that there is probably some surplus of production over the current level of consumption and some further curtailment of output appears necessary to restore confidence in the outlook, in the absence of any signs of an appreciable improvement in global consumption. The report of the Rhodesian Anglo-American Corporation indicated that although no definite announcement of a cut in output on the part of the Group's mines has been made, their total output in 1957 will, in fact, be fully 10 per cent less than had been anticipated, mainly owing to water problems at the

METALS, DECEMBER, 1957

By L. H. TARRING
London, England

Bancroft mine which have prevented it building up output to the planned level according to schedule.

London Meeting

Rumors have been heard at intervals for some little time about the possibility of discussions being held on the broad subject of copper supplies, and it is now learned that early in December several important producers were represented at a meeting with consumers in London at one of the meetings of the International Wrought Non-Ferrous Metals Council. No details have been released officially, but it is understood that the meeting was quite unofficial and no formal decisions were taken.

Observers were present from Chile but these are reported to have been there as private individuals and not as representatives of the Chilean

Government. It was interesting to note, however, how sensitive the market is likely to be to any developments in connection with production, since the mere fact that the meeting was being held, seemed to be enough to cause an advance of about £4 a ton in open market prices here. Most of this, however, was quickly lost when it was realized that no definite proposals had been made regarding the curtailment of production.

There seems little doubt that what is really needed to restore confidence is for some trimming of Chilean production, preferably accompanied by a similar move by the Belgian Congo.

Tin Price Movements

Some fairly dramatic price movements were seen in the tin market during November. With consumers more or less all over the world showing very little buying interest, and an increasing volume of metal being offered to the Buffer Stock, doubts began to emerge as to whether the funds at the disposal of the Buffer Stock would prove adequate to absorb all the surplus before the International Tin Council met again in January.

Whilst cash prices were held steady at the minimum support level of £730 a ton, the almost total lack of buying interest forced down the Eastern price and this in turn led to increased selling pressure on the forward price on the London market, with the result that this declined with increasing momentum until it was no less than £50 a ton below the cash figure.

The International Tin Council, however, first advanced the date of its next meeting to December 11, and then further advanced it to December 4 and at the same time, announced that the producing countries had been asked to provide the second contribution for the Buffer Stock, equal to 5,000 tons of tin. The delegations of the countries concerned urged their Governments to provide the whole sum in cash at £730 a ton. These moves went a long way to restore confidence, but prior to the end of the meeting forward metal was still at some discount from cash.

The I. T. C. meeting in London on December 4 and 5 took drastic action to restore the situation. Not only did it announce the imposition of export quotas effective from December 15, for a period of three months which represents a cut of no less than 28½ per cent over all from the rate at which the six producing countries were operating in the 12 months to September 30, 1957 (which was much larger than most people had anticipated), but they also authorized the Buffer Stock Manager to operate on

U. K. COPPER STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics, production of copper in the U. K. in September amounted to 10,926 tons primary refined and 9,002 tons secondary refined, with 701 tons rough. During the month stocks moved as follows: blister copper fell from 20,902 tons to 19,604 tons and refined rose from 77,693 tons (comprising 33,419 tons at consumers, 14,896 tons in L.M.E. warehouses and 23,378 other stocks) to 81,211 tons (comprising 39,265 tons at consumers, 18,078 tons in L.M.E. warehouses and 23,868 other stocks). Consumption showed a welcome recovery from the August level as detailed below:

Product	Sept. 1957	Jan.-Sept. 1956	1957
Unalloyed Copper			
Products			
Wire (1)	23,054	177,825	199,659
Rods, Bars & Sections	1,639	14,157	13,049
Sheet, Strip & Plate	4,905	42,046	42,756
Tubes	5,156	39,145	42,823
Castings and Misc.	650	5,850	5,850
Alloyed Copper			
Products			
Wire	1,310	13,256	12,280
Rods, Bars & Sections	10,884	93,609	88,786
Sheet, Strip & Plate	7,619	85,809	66,046
Tubes	1,619	16,726	16,521
Castings and Misc.	6,500	57,157	57,157
Copper Sulphate	2,848	37,295	34,338
Total All Products ..	66,174	582,875	579,258
Copper Content of			
Output	55,070	470,481	477,194
Consumption of Refined Copper (2) ..	43,883	368,367	375,607
Consumption of Copper and Alloy Scrap (3) (copper content) ..	11,187	102,114	101,587

NOTE:

- (1) Consumption of H. C. Copper and Cadmium Copper Wire Rods for Wire and production of Wire Rods for Export.
- (2) Virgin and Secondary Refined Copper.
- (3) Consumption of copper in scrap is obtained by the difference between copper content of output and consumption of refined copper, and should be considered over a period since monthly figures of scrap consumption are affected by variations in the amount of work in progress.

AVERAGE BRITISH PRICES FOR COPPER, TIN, LEAD, ZINC

(Per Long Ton)

Mean of Bid and Asked Cash Quotation at Close of Morning Session on London Metal Exchange

	COPPER			TIN			LEAD			ZINC		
	Cash	3 Months	Settlement	Cash	3 Months	Settlement	Current Month	3rd Following	Current Month	3rd Following	Current Month	3rd Following
1954 Averages	£ 248 17 11	£ 239 17 7	£ 249 0 11	£ 719 8 11	£ 709 17 7	£ 720 6 7	£ 98 8 12	£ 94 7 4	£ 78 5 4	£ 77 16 11	£ 78 5 4	£ 77 16 11
1955 Averages	£ 351 14 11	£ 341 0 3	£ 352 5 6	£ 740 2 12	£ 736 12 11	£ 740 12 8	£ 105 17 3	£ 105 9 6	£ 90 13 4	£ 89 12 3	£ 90 13 4	£ 89 12 3
1956 Averages	£ 328 14 5	£ 324 13 1	£ 329 1 8	£ 787 14 9	£ 774 7 7	£ 788 13 3	£ 116 6 5	£ 114 8 9	£ 97 14 3	£ 95 3 7	£ 97 14 3	£ 95 3 7
1957												
January	265 17 11	264 14 4	266 3 2	789 3 2	771 10 5	789 16 4	116 5 1	114 10 8	103 5 1	98 13 8	103 5 1	98 13 8
February	245 11 2	244 2 0	245 16 3	770 16 9	752 9 6	771 8 6	113 3 0	112 6 11	99 8 11	96 17 0	99 8 11	96 17 0
March	239 10 11	239 2 9	239 14 6	770 14 6	756 8 7	771 7 2	113 2 1	112 6 11	96 12 3	94 15 9	96 12 3	94 15 9
April	241 19 2	242 15 9	242 2 0	774 4 9	768 7 6	774 17 6	111 17 5	111 14 1	98 7 6	94 13 5	98 7 6	94 13 5
May	237 17 5	238 1 2	238 0 3	765 8 1	763 8 6	765 15 3	99 9 3	99 16 1	85 15 7	82 8 3	85 15 7	82 8 3
June	227 2 8	228 16 2	227 5 9	762 10 0	759 14 9	762 16 10	91 13 9	91 19 9	74 6 1	73 16 4	74 6 1	73 16 4
July	217 10 12	219 11 9	217 14 9	753 2 8	750 3 8	753 13 1	90 12 3	91 4 11	75 3 1	73 14 11	75 3 1	73 14 11
August	208 12 3	210 12 7	208 15 9	740 0 9	748 18 1	740 6 8	91 14 6	92 0 3	73 17 10	73 13 9	73 17 10	73 13 9
September	193 18 2	197 5 1	194 3 4	739 13 7	739 16 11	740 0 11	89 16 9	90 9 1	73 1 9	73 7 5	73 1 9	73 7 5
October	186 9 8	190 0 9	186 14 7	731 12 2	728 15 8	731 17 5	85 18 1	86 10 1	69 3 7	69 4 4	69 3 7	69 4 4
November	187 18 7	191 17 9	188 3 4	730 5 3	710 12 7	730 10 6	83 3 4	83 6 2	67 10 6	67 1 3	67 10 6	67 1 3

the market should the price of tin metal reach the middle range during that period.

This, it is understood, was to ensure that there will not be an undue rise in the price of tin, as might well have occurred in the light of the Council's decisions, especially as many people were already of the opinion that sales to Buffer Stock in recent weeks had considerably exceeded the actual surplus of production over normal consumption. The fact that a further contribution has been called for the Buffer Stock indicates that it was already holding, or on the point of holding, 10,000 tons of tin and a striking feature is that signatory countries have been called upon to provide the whole of this money by December 6.

It would seem, therefore, quite assured that the minimum support price of £730 a ton will be adequately protected in the coming months, and unless something quite unforeseen happens, the sharp cut in the export quotas for the next three months should make certain that no embarrassing tonnages will be available for offer to the Buffer Stock.

At the same time, it is interesting to see that in order to ensure that the market does no swing too violently in the other direction, the I.T.C. is prepared to see Buffer Stock tin sold at lower levels than were previously permitted, thus indicating its general desire to try and achieve rea-

U. K. LEAD STATISTICS

The British Bureau of Non-Ferrous Metal Statistics reports lead consumption during September as 29,519 tons (14,722 tons imported virgin, 6,273 tons English refined, 8,524 tons scrap, including remelted) against 24,756 tons the previous month. Production of English refined during the month amounted to 7,852 tons compared with 6,245 tons in August. Full consumption details are given below:

	(Long Tons) 9 Months		
	Sept. 1957	Sept. 1956	Sept. 1957
Cables	9,556	84,047	86,603
Batteries — as Metal	2,303	20,593	20,584
Battery Oxides	2,096	19,213	17,699
Tetraethyl Lead	2,057	15,697	15,807
Other Oxides and Compounds	2,163	19,423	17,095
White Lead	936	7,805	7,184
Shot	342	3,345	3,209
Sheet and Pipe	5,517	55,239	51,249
Foil and Collapsible Tubes	389	3,694	3,301
Other Rolled and Extruded	526	5,801	4,874
Solder	1,099	10,228	9,415
Alloys	1,477	12,566	12,514
Miscellaneous Uses	1,058	9,199	9,501
Total Consumption of which	29,519	266,850	259,035
Imported Virgin Lead	14,722	129,565	124,047
English Refined	6,273	63,573	59,419
Scrap, including remelted	8,524	73,712	75,569

U. K. TIN STATISTICS

During September stocks of tin in the U. K. remained virtually unchanged, ending the month at 6,308 tons compared with 6,320 tons at the beginning of the month. Production of primary tin in the U. K. was 2,260 tons, rather less than the 2,742 tons in August. Consumption details for September are as follows:

Trade	9 Mos. Ending 30th Sept.		
	1957	1956	1957
Tinplate	939	7,219	8,793
Tinning:			
Copper Wire	45	357	398
Steel Wire	8	78	75
Other	66	632	542
Total	119	1,067	1,015
Solder	145	2,152	1,505
Alloys:			
Whitemetal	237	2,585	2,036
Bronze & Gunmetal	203	2,044	1,765
Other	40	339	283
Total	480	4,968	4,084
Wrought Tin (1)			
Foil & Sheets	21	215	215
Collapsible Tubes	36	255	244
Pipes, Wire & Capsules	3	34	46
Total	60	504	505
Chemicals (2)	84	759	823
Other Uses (3)	9	91	80
Total All Trades	1,836	16,760	16,805

(1) Includes Compo. & "B" metal.
(2) Mainly Tin Oxide.
(3) Mainly Powder.

sonable price stability, within the middle of the three-price ranges laid down in the Agreement, namely, £730 to £830 a ton.

Stocks in London Metal Exchanges during November rose sharply from 3,657 tons to 7,695 tons—the highest level since open market trading was resumed. Much of this metal is, of course, in Buffer Stock hands and not available to the market.

Lead Market Dismal

The past month has been another dismal one as far as the lead market is concerned. With supplies plentiful, and rather discouraging indications regarding the trend of U. S. domestic consumption, to say nothing of the expectation that the U. S. A. may impose higher import duties early in the New Year, prices sagged steadily during November, losing about £10 a ton on the month.

The gap between the London and U. S. prices widened to such an extent that although it was resisted as long as possible, the U. S. quotation eventually had to be dropped by half a cent on December 2. Although this had been regarded as almost inevitable, it, nevertheless, further depressed sentiment on this side of the Atlantic and resulted in a further step downwards in prices here.

It now seems fairly certain that

the dearer credit policy of the Government and limitation of capital investment, will slow down the rate of activity in the building industry and this is curtailing demand for pipes and sheets to some extent. In the first nine months of this year consumption was nearly 8,000 tons down compared with the same period of 1956, but the offtake in cables was rather higher and the battery trade after being rather dull in the early part of the year is currently benefiting from the normal seasonal replacement demand and the high level of new motor-car production.

On December 4 the Board of Trade followed up its October announcement that it intended to dispose of its remaining stocks of lead amounting to about 20,000 tons by announcing that it was inviting tenders for the first 7,200 tons of this quantity for delivery and pricing from January 1, 1958 at the rate of 1,200 tons a month. Of the 7,200 tons, only about 1,900 tons will be offered by open tender, the remainder being offered back to the original suppliers. In view of the limited quantities involved, and the knowledge that such a release was in prospect, this had no

(Continued on Page 19)

U. K. ZINC STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics stocks of zinc in the U. K. amounted to 41,255 tons at the end of September against 44,207 tons the previous month. Production also fell slightly over the month to 6,379 tons. On the other hand consumption rose to 27,792 tons from 20,381 tons the previous month. Full consumption details are given below:

Trade	9 Mos. Ending 30th Sept.		
	1957	1956	1957
Brass	8,441	78,642	70,862
Galvanizing	8,474	78,383	79,422
of which—			
General	2,917	25,829	25,479
Sheet	2,478	23,275	27,575
Wire	1,743	15,601	15,540
Tube	1,336	13,678	10,828
Rolls Zinc	1,885	17,127	16,978
Zinc Oxide	2,480	19,986	19,994
Zinc Diecasting & Forming Alloy	4,467	28,061r	31,078
Zinc Dust	1,085	7,095	8,593
Miscel. uses	960	8,886	8,803
Total All Trades	27,792	238,180r	235,730
of which—			
Slab Zinc High Purity (99.99%)	4,905	31,852r	34,145
Electrolytic & High Grade (99.95%)	4,923	45,211	42,715
G.O.B. Prime Western and Debased Other Virgin	10,440	93,169	95,089
Material	218	2,455	2,204
Remelted Zinc	571	4,062	4,566
Scrap — Zinc (Content) Zinc Metal, Alloys & residues	3,106	24,857	24,899
Brass and Other Copper Alloys	3,629	36,574	32,112

r Revised.

METALS, DECEMBER, 1957

1965 U. S. Aluminum Use May Double That of '55

(Continued from Page 9)

er durable goods, atomic energy, containers and packaging — these are all markets that will continue to broaden and see many new developments. To center on one for a moment, let's take the broad packaging field, for it has literally mushroomed in recent years.

Packaging Field

This market includes such diversified products as bottle caps and similar closures, foil for flexible containers and packages, household foil and many other disposable containers used in the food and drug industries. The eye-appeal of aluminum foil imprinted with colorful designs has caught on like wild-fire. Hardly another material can boast the point-of-sale advantages of aluminum foil. Whole new ideas in food merchandising have resulted. A few minutes spent strolling through today's super market affords dramatic evidence of the impact this packaging material has made on consumer buying habits.

Aluminum foil containers of all kinds do much more than simply dress up products. They are nontoxic, greaseproof and provide an effective moisture seal. In addition, in the case of the rapidly growing frozen and pre-cooked foods industry, aluminum foil offers the multiple advantage of permitting foods to be thawed, heated and served in the same package in which they are supplied.

Aluminum Cans

Exciting things are happening in closures and collapsible tubes, too. But we haven't even mentioned the real "plum" — cans made of alu-

minum. Recent announcements by major container manufacturers indicate that aluminum cans are making rapid progress toward becoming an economically feasible replacement for today's tin-plated cans. The new arrangement made by Reynolds with Standard Oil is a bold venture in this field. The potential use of metal for this one application is staggering. All in all, the container and packaging field, though still relatively small set alongside building or transportation, will undoubtedly assume a much larger portion of the total demand picture in the years ahead.

As 1957 draws to a close, then, this over-all challenge of what I like to think of as "Opportune Abundance" is what the industry sees ahead. Perhaps at no other time in its almost 70-year history has the industry been able to see the direction of its growth so clearly.

Output Cuts Can Restore Copper Market Stability

(Continued from Page 10)

lies by voluntary reduction of our output to 90 per cent of capacity.

Copper Marketing

A subsidiary factor is the question of different marketing methods. I say subsidiary because the basic influence on copper prices is the statistical position. In other words production policy rather than marketing policy appears to me to be at the root of the problem.

So far as our business is concerned it will be recalled that early in 1955 we were asked by the British Non-Ferrous Metals Federation to adopt a system of quoting prices which would offer a more stable price level

than the prices quoted by the London Metal Exchange. I made it clear in my statement last year that we have been prepared always to examine any marketing system which our customers, and other importers of copper into the United Kingdom, may desire. I have also stressed the fact that this is a question which concerns not so much our shareholders as our customers.

During the past year, at the request of the importers of copper into the United Kingdom, the two Rhodesian groups jointly presented to these importers certain proposals designed to achieve a uniformity of price for Rhodesian copper imported into the U. K. These proposals were designed to meet the wish of the importers to have a Rhodesian price system which, while not deviating too far from the general level of prices on the London Metal Exchange, would enable copper prices to remain unaltered for longer periods.

Unfortunately, after several months of negotiations, it became clear at the beginning of this month that it would not be possible to reach agreement between the Rhodesian producers on the one hand and the British importers on the other. The industry was thus faced with the continuance of a dual price structure in the United Kingdom which is not a position that should be maintained indefinitely. We were, therefore, not surprised to receive a letter from the British Non-Ferrous Metals Federation in which a request was made for us to consider a reversion to the London Metal Exchange basis of pricing. In line with our declared wish to conform as far as possible to the wishes of users of our copper, we have agreed to accede to this request.

Copper Brands

Deliverable Against Commodity Exchange, Inc.

Brand or Marks	Producer	Grade	Brand or Marks	Producer	Grade
B. E. R.	American Smelting & Refining Co. (Baltimore, Md.)	Electrolytic	C & H	Calumet & Hecla Consolidated Copper Co.	Lake
P. A.	American Smelting & Refining Co. (Maurer, N. J.)	Electrolytic	C. R.	Copper Range Company	Lake
T	American Smelting & Refining Co. (Tacoma, Wash.)	Electrolytic	Q. M. CO.	Quincy Mining Company	Lake
B. & M.	Anaconda Copper Mining Co.	Electrolytic			
AE	Andes Copper Mining Co.	Electrolytic			
BOLIDEN	Bolidens-Gruvaktiebolag	Electrolytic			
C. C. R.	Canadian Copper Refiners Ltd. (Montreal)	Electrolytic			
C de P Peru	Cerro de Pasco Corporation	Electrolytic			
C. C. C.	Chile Copper Company	Electrolytic			
F E C	Falconbridge Nickel Mines, Ltd.	Electrolytic			
K U E	Kennecott Copper Corp.	Electrolytic			
L. M. C.	Lewin Metals Corporation	Electrolytic			
M U F	Mufulira Copper Mines, Ltd.	Electrolytic			
N A	Norddeutsche Affinerie	Electrolytic			
O R C	Ontario Refining Co., Ltd.	Electrolytic			
A. L. S.	Philips Dodge Refining Corp. (For Adolph Lewishohn Selling Corp.)	Electrolytic			
L. N. S.	Philips Dodge Refining Corp.	Electrolytic			
P * D	Philips Dodge Corporation	Electrolytic			
N. E. C.	Raritan Copper Works	Electrolytic			
R E C	Rhokana Corporation	Electrolytic			
B O R	Rudnic Bakra i Topionice	Electrolytic			
U M K	Union Miniere du Haut Katanga	Electrolytic			
D R W	†United States Metals Refining Co.	Electrolytic			
AMCO	†United States Metals Refining Co.	Electrolytic			
OFHC	†United States Metals Refining Co.	Electrolytic			
W E K	Zinnwerke Wilhelmsburg G.m.b.H.	Electrolytic			

†Subsidiary, The American Metal Co., Ltd.

Official List of Approved Refiners Whose CATHODES are deliverable against Commodity Exchange, Inc., Copper Contract

American Smelting & Refining Co.	Mufulira Copper Mines, Ltd.
Anaconda Copper Mining Co.	Norddeutsche Affinerie
Andes Copper Mining Co.	Ontario Refining Co., Ltd.
Bolidens Gruvaktiebolag	Philips Dodge Refining Corp.
Canadian Copper Refiners, Ltd.	Philips Dodge Corporation
Cerro de Pasco Copper Corp.	Raritan Copper Works
Chile Copper Company	Rhokana Corporation
Consolidated Mining & Smelting Co.	Rudnic Bakra i Topionice
Falconbridge Nickel Mines, Ltd.	Union Miniere du Haut Katanga
Kennecott Copper Corp.	United States Metals Refining Co.
Lewin Metals Corp.	Zinnwerke Wilhelmsburg G.m.b.H.

United States Duties on Principal Ore and Metal Imports

(Including Revisions in Effect June 30, 1957, Under Geneva Agreements)

(Quantities Are in Pounds Unless Otherwise Stated; n.s.p.f. Stands for "Not Specially Provided For.")

COPPER

NOTE — The excise tax of 4c a pound on copper (which was reduced to 2c a pound by the Geneva Trade Agreement) was suspended in April, 1947, until March 31, 1949, and on expiration it was further suspended until June 30, 1950. The tax was reimposed on July 1, 1950. It was suspended again on May 22, 1951, retroactive to April 1, 1951, and until February 15, 1953, and again until June 30, 1954. Suspension further extended to June 30, 1955, and again until June 30, 1958. If import tax is restored, the 1956 Geneva Agreement provides for 5% reductions effective on June 30 of 1956, 1957 and 1958, provided the price is above 24c; if the price is below 24c the 2c tax would prevail.

Copper ore and concentrates, usable as flux, etc., copper content	free
Copper ore and concentrates, product of Cuba and Philippines, copper content	free
Copper ore and concentrates, copper content	free
Regulus, black, or coarse copper, and cement copper, copper content	free
Unrefined black, blister, and converter copper in pigs or converter bars, copper content	free
Refined copper in ingots, plates or bars, copper content	free
Copper rolls, rods or sheets	1 1/4c lb.
Copper seamless tubes and tubing	3 1/2c lb.
Copper plain wire	12 1/2%
Copper brazed tubes†	4.90c lb.
Old and scrap copper, fit only for remanufacture; and scale and clippings, copper content	free

BRASS

Brass rods, sheets, plates, bars, strips, Muntz or yellow metal sheets, sheathing, bolts, piston rods, shafting and bronze rods, tubes and sheets	2c lb.
Brass tubes and tubing, seamless	2c lb.
Brass tubes, brazed, angles and channels	6c lb.
Brass and bronze wire	12 1/2%

LEAD

NOTE — Import duties on lead-bearing ores, flue dust, and mattes of all kinds, lead bullion or base bullion, lead in pigs and bars, lead dross, reclaimed lead and antimonial lead were suspended February 12, 1952, and reimposed on June 26, 1952. Lead scrap duty was reimposed July 1, 1952.

Lead-bearing ores and mattes, n. s. p. f., lead content	3/4c lb.
Bullion or base bullion, lead content	1 1/16c lb.
Pigs and bars, lead content	1 1/16c lb.
Reclaimed, scrap, dross, lead content	1 1/16c lb.
Babbitt metal and solder, lead content	1 1/16c lb.
Pipe, sheets, shot, glaziers' lead, and wire	1 5/16c lb.
Type metal and antimonial lead, lead content	1 1/16c lb.
White lead	1.05c lb.
Litharge	1 1/4c lb.
Red lead	15/16c lb.
Orange mineral	1c lb.

ZINC

NOTE — Import duties on zinc-bearing ores, and on zinc in blocks, pigs and slabs were suspended February 12, 1952, and reimposed on July 24, 1952. Tax on old zinc and dross and skimmings reimposed July 1, 1953.

Zinc-bearing ores, except pyrites containing not more than 3% zinc, zinc content	6/10c lb.
Zinc contained in zinc-bearing ores, n. e. s., not recoverable, zinc content	6/10c lb.
Zinc, old and worn out, fit only for remanufacture	3/4c lb.
Dross and skimmings	3/4c lb.
Zinc in blocks, pigs or slabs	7/10c lb.
Zinc in sheets	1c lb.
Zinc sheets, plated with nickel or other base metal, or solutions	1 1/4c lb.

Zinc dust	7/10c lb.
Zinc die-casting alloys	12 1/2%
Zinc oxide and leaded zinc oxides containing not more than 25% lead, dry	3/5c lb.
ground in or mixed with oil or water	1c lb.

MISCELLANEOUS METALS AND ORES

Aluminum, metal and alloys, crude, except alloys elsewhere provided for†	1.30c lb.
Aluminum scrap	free
Aluminum plates, sheets, bars, rods, circles, squares, etc.†	2.70c lb.
Antimony ore, antimony content	free
Antimony metal and regulus	2c lb.
Antimony needle or liquidated	1/4c lb.
Antimony oxide	1c lb.
Antimony sulphides	1/2c lb. & 12 1/2%
Arsenic, metallic†	2.70c lb.
Arsenious acid or white arsenic	free
Bauxite, crude*	free
Bauxite, refined**	1/4c lb.
Bismuth	1 1/8%
Bismuth salts and compounds	35%
Beryllium metal†	22 1/2%
Beryllium ore	free
Cadmium	3 3/4c lb.
Cadmium flue dust, cadmium content	free
Chrome ore or chromite	free
Chrome or chromium metal†	11%
Cobalt metal	free
Cobalt ore and concentrates, cobalt content	free
Magnesium, metallic†	14.30c lb.
Magnesium powder, sheets, wire†	18c lb. & 9 1/2%
Magnesium alloys†	20c & 10%
Magnesium scrap	free
Manganese ores, containing over 10% manganese, manganese content	1/4c lb., except Cuba, free
Molybdenum ore or concentrates, molybdenum content†	31 1/2c lb.
Nickel ore, matte and oxide	free
Nickel and alloys, nickel chief value, n. s. p. f., in pigs, ingots, shot, cubes, grains, cathodes, or similar forms	1 1/4c lb.
Nickel, bars, rods, plates, sheets, castings, strips, wire or electrodes	12 1/2%
Nickel scrap	free
Nickel tubes, tubing	6 1/4%
(if cold rolled, drawn or worked — 2 1/2% extra)	
Platinum, grain, nuggets, sponge and scrap, oz. troy	free
Platinum in ingots, bars, sheets, or plates, not less than 1/8 in. thick, oz. troy	free
Platinum, ores, platinum content, oz. troy	free
Quicksilver or mercury	25c lb.
Selenium and salts	free
Tantalum	12 1/2%
Tin ore, cassiterite, and black oxide of tin, tin content	free
Tin in bars, blocks, pigs, grain, granulated, and scrap, and alloys, chief value tin, n. s. p. f.	free
Tungsten ore or concentrates, tungsten content	50c lb.

*Crude bauxite import duty suspended to July 15, 1958. **Under Public Law 25 alumina imported for use in aluminum production is free for entries from July 17, 1956 to July 16, 1958. †Tariff to be reduced 5% on June 30, 1958, under Geneva Agreement which expires on June 30, 1959.

CUSTOM SMELTER COPPER RAISED ½c TO 25½c POUND FOLLOWING ANNOUNCEMENT OF PRODUCTION CUTBACKS

Lead Cut ½c to 13c in Wake of London Decline; Zinc Unchanged; Tin Displays More Strength; Silver, Platinum, Quicksilver Prices Down

December 17, 1957
THE AILING copper market took a turn for the better at the end of the period in review, reflecting cutbacks in production by Kennecott Copper Corp., Cerro de Pasco Corp., Howe Sound Co. and a reported cutback by Union Minière du Haut Katanga, the large Belgian producer. Domestic custom smelters increased their electrolytic copper price 0.50c on December 16 to 25.50c a pound, following a fairly sharp rise in the electro quotation on the London market. However, London copper prices, while still above their recent lows, have receded somewhat and it was questionable if the new strength generated by the production cutbacks could be sustained. Primary producers maintained their 27.00c-a-pound delivered quotation established early in September.

The New York lead price declined 0.50c on December 2 to 13.00c a pound. Although the London price again weakened, a further drop in the domestic quotation was resisted. Domestic zinc prices were subjected to similar pressure but the price for the Prime Western grade held steady at 10.00c a pound East St. Louis.

Tin prices displayed a good deal more strength, with spot Straits quoted at 92.875c a pound on December 17 compared with the last previous quotation in this space of 89.875c for November 13.

Although primary aluminum supplies were plentiful, producers maintained their price at 28.10c a pound, f.o.b., for the 30-pound 99½ per cent plus ingot.

Silver fluctuated quite a bit during the month in review, the price having changed seven times from November 12 to December 17, when the New York quotation was established at 89.625c an ounce. Platinum weakened further, to \$77-\$80 an ounce on December 4. Quicksilver also was easier and was available at \$223 to \$230 per flask.

Kennecott Output Cut

Kennecott Copper Corp., the world's largest copper producer, announced that at the beginning of January it will put into effect a cut in output of 12 per cent at its U. S. properties, which will mean a reduction in production of approximately 3,800 tons a month. A company spokesman said that "continued lack of domestic demand for copper" forced the curtailment.

Howe Sound Co. and Cerro de Pasco also announced cutbacks in production. The Howe curtailment is estimated at about 300 tons a month and the Cerro reduction at about 300 to 350 tons, making a combined slash for the two firms of 600 to 650 tons a month.

Union Minière du Haut Katanga,

the world's fifth largest producer, also was reported to have put into effect a 10 per cent cut in production, or a reduction of about 2,300 tons a month.

Phelps Dodge and Anaconda previously announced production curtailments. The only two prominent producers still to be heard from are Chile and the Anglo-American group of mines in Northern Rhodesia. The Rhodesian Selection Trust in Northern Rhodesia put a 10 per cent cut in effect earlier this year.

Trade circles believed that the Chilean Government, which derives a good portion of its revenue from the tax on copper, will probably agree to an output cut at the Kennecott and Anaconda properties in Chile. There have been conflicting statements from Chilean officials on this matter of curtailment but some positive action now is anticipated. It was pointed out that U. S. mine workers of Kennecott and Anaconda would not take kindly to their cutback in working schedules due to the production curtailments unless similar cutbacks were made at these firms' Chilean properties.

More Copper for Stockpile

In addition to the production curtailments, about 8,500 tons of copper will probably be "put" to the U. S. Government by San Manuel and White Pine which have contracts with the Government. San Manuel's floor price with the Government is 27.05c a pound, and White Pine's about 28.50c.

Between the curtailments in output and the "puts" to the Government, the domestic market supply of copper could be cut about 21,000 tons a month. This drop, however, has been offset by new mines that came into production this year. Concerning "puts" to the Government, in the first 11 months of this year the Government has taken about 70,000 tons of copper for the stockpile whereas in all of 1956 it took only 40,000 tons.

LME Up Sharply

Copper prices at the first call on the London Metal Exchange on December 16 advanced £9 10s from the previous close on the news of the production curtailment. The gain, however, was not maintained at the second call, the price declining £3 10s. At the first call on December 17 the price dipped another £2, to £183 a long ton (equivalent to 22.875c a pound).

Custom Smelter Price Up

The domestic custom smelter 0.50c-a-pound increase on December 16, to 25.50c a pound delivered, was in sympathy with the London rise and the news of the production curtailment. The dip in the LME price later in the day took some of the steam out of the domestic market and consumers were not rushing to buy smelter copper at

25.50c. In the outside market, copper was to be had at concessions without attracting much interest.

Smelters on December 16 also increased their scrap copper buying prices, by 0.25c a pound, to a basis of 19.25c a pound for No. 2 heavy copper and wire scrap. The 19.25c level was about 0.75c a pound less than the price last quoted in this space a month ago.

Consumer buying has not been brisk, which is not unusual at the year-end when users make every effort to keep their inventories at low levels. Fabricators were not too happy over the amount of business they were doing, and one major independent mill, Revere Copper and Brass, found it necessary to cut its copper anode prices 2.50c a pound on December 11, in order to meet competition.

Katanga Price Raised

Union Minière du Haut Katanga on December 17 raised its copper price to 23.71c a pound, c.i.f. New York or Antwerp; the previous quotation of 22.70c was set on December 12.

The French selling agency, GIRM, increased its price on December 17 to 24.38c a pound f.a.s. New York; the previous price of 23.95c was established on December 12.

November Copper Statistics

Foreign copper production set an all-time new high in November, although the sting of this news was somewhat eased by the production curtailments by Kennecott and Katanga. Crude copper output outside the U. S. in November totaled 165,049 tons as against 162,464 tons in October.

Domestic crude copper output dropped to 97,264 tons in November from 102,107 tons in October. U. S. refined copper statistics for November follow in tons, with the October totals in parentheses: production, 128,371 (129,832); deliveries to domestic fabricators, 106,815 (114,203); stocks in producers' hands end of month, 161,552 (166,976).

Lead, Zinc Output Cut

Bunker Hill Co. announced December 15 it had "temporarily" curtailed production at the lead and zinc mines at Kellogg, Idaho. The cut in operations will result in a 16 per cent reduction in the 31,555 tons of lead produced annually at the company's Bunker Hill mine. Beginning January 1, production at the company's electrolytic zinc plant near Kellogg will be cut, reducing daily output of finished zinc metal by 20 per cent.

The reduction in the domestic lead price which had been anticipated for some time, due to the downward trend for the price of the metal on the LME, materialized on December 2. The New York price was cut 0.50c, to a basis of

13.00c a pound, the lowest level since March 10, 1954.

The more recent uptrend on the LME and the news of curtailment by Bunker Hill had a firming influence on the domestic market but the volume of business left much to be desired.

Zinc Market Steady

Sentiment in the zinc market also was better as a result of the uptrend in the London quotation and on the news of the Bunker Hill curtailment. The LME quotation on December 16, however, was still sufficiently low to permit foreign zinc to be laid down on the U. S. Eastern seaboard at about 9.25c a pound, duty paid, whereas the domestic price is 10.50c New York.

While the volume of domestic business continued light, there was no talk among producers of lowering their prices, which were maintained on the basis of 10.00c a pound East St. Louis for the Prime Western grade.

Trade circles here believed that U. K. lead and zinc prices have been discounted because of the feeling abroad that higher U. S. import duties for these metals are a certainty.

Tin Prices Firmer

Action taken by the International Tin Council at its meeting in London on December 4 and 5 had a firming influence on domestic tin prices. Spot Straits tin at New York on December 17 was 92.875c a pound, up 3.00c from the last quoted price in this space

of 89.875c for November 13. (See London metal review in this issue for further details on Council meeting.)

During the November 13-December 17 period, the high was the 93.50c of December 16 while the low of 87.00c occurred on November 22.

New Era in Aluminum

A new era in the aluminum industry, a "break-through" to mass production techniques, was predicted by Richard S. Reynolds, Jr., president of Reynolds Metals Co. He called the present over-supply of the metal "not a liability but an asset," and forecast a five-fold rise in consumption by 1975 to 10,000,000 tons a year.

Primary aluminum prices were unchanged, on the basis of 28.10c a pound for the 99½ per cent plus 30-pound ingot.

Silver Trend Downward

Silver prices fluctuated during the month in review with the general trend downward, from the last price quoted in this space of 90.375c an ounce on November 12 to 89.625c an ounce on December 17.

The price changes, chronologically, were: on November 22, off 0.125c to 90.25c; on November 26, off 0.25c to 90.00c; on December 5, off 0.25c to 89.75c; on November 6, up 0.25c to 90.00c; on December 13, off 0.125c to 89.875c, and on December 17, off 0.25c to 89.625c an ounce.

Platinum Declines

Major refiners on December 5 re-

duced their platinum prices \$7 an ounce, to \$77 an ounce for bulk quantities and \$80 an ounce for retail lots. It was the first change in the official refiner quotation since July 29, when prices were reduced \$8 an ounce. The December 5 cut reflected a falling off in demand by industry coupled with an increased world supply.

Quicksilver Easy

Spot quicksilver was available in the domestic market at this writing at \$223 to \$230 per flask of 76 pounds, as against \$227 to \$230 quoted on November 6. The lower range became effective November 27. Foreign metal was available at \$223 with domestic quicksilver in the East offered at up to \$230.

Thallium Price Cut

The price of thallium was reduced \$5 a pound on December 11 to \$7.50 a pound. The metal is reported to have been in excess supply.

Zirconium Reduced

The price of high grade zirconium sponge for nuclear reactors was reduced on November 27 to \$7.50 a pound for 1,000-pound lots, with the price of commercial grade sponge cut to \$5 a pound.

Selenium Prices Lowered

A leading producer reduced its prices for common grade and high purity grade of selenium \$3 a pound, effective November 18. The common grade is now \$7.50 a pound and the high purity \$10.50 a pound, delivered.

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Daily Metal Quotations in November, 1957

The following quotations are taken from the Daily Metal Reporter*
(In Cents Per Pound)

	Copper		Tin		Lead		Zinc		Alumi- num		Anti- mony		Silver				
	Producers' Price	Del. Conn.	Custom Smelters' or Outside Price	Electro Refinery f.o.b.	Lake Del.	Average Electrolytic Export Price f.o.b. N. Y.	Spot	Prompt	New York	Outside St. Louis	Prime West. f.o.b.	Brass Spec. f.o.b.	High Grade Delivered	Spec. High Grade Delivered	30-Lb. Ingot 99 1/2% Plus (f.o.b.)	Domestic f.o.b. Laredo	(Cents Per Ounce) New York
1	27.00	27.00	25.50	25.85	27.00	24.50	90.00	90.00	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.625
2	27.00	27.00	25.50	25.85	27.00	24.50	89.625	89.625	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.625
4	27.00	27.00	25.50	25.85	27.00	24.50	89.375	89.375	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.625
6	27.00	27.00	26.00	26.10	27.00	25.00	89.50	89.50	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.625
7	27.00	27.00	26.00	26.10	27.00	25.00	89.50	89.50	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.625
8	27.00	27.00	26.00	26.10	27.00	24.875	89.50	89.50	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.625
9	27.00	27.00	26.00	26.10	27.00	24.875	89.50	89.50	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.625
12	27.00	27.00	26.00	26.10	27.00	24.875	89.75	89.75	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.375
13	27.00	27.00	25.50	25.85	27.00	24.875	89.875	89.875	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.375
14	27.00	27.00	25.50	25.85	27.00	24.50	89.625	89.625	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.375
15	27.00	27.00	25.50	25.85	27.00	24.50	89.875	89.875	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.375
16	27.00	27.00	25.50	25.85	27.00	24.50	89.875	89.875	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.375
18	27.00	27.00	25.50	25.85	27.00	24.50	89.75	89.75	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.375
19	27.00	27.00	25.50	25.85	27.00	24.50	89.375	89.375	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.375
20	27.00	27.00	25.50	25.85	27.00	24.50	89.00	89.00	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.375
21	27.00	27.00	25.00	25.60	27.00	24.50	88.375	88.375	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.375
22	27.00	27.00	25.00	25.60	27.00	24.00	87.00	87.00	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.25
23	27.00	27.00	25.00	25.60	27.00	24.00	87.00	87.00	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.25
25	27.00	27.00	25.00	25.60	27.00	24.00	87.125	87.125	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.25
26	27.00	27.00	25.00	25.60	27.00	24.00	88.00	88.00	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.25
27	27.00	27.00	25.00	25.60	27.00	24.00	89.375	89.375	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.00
29	27.00	27.00	25.00	25.60	27.00	24.00	91.125	91.125	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.00
30	27.00	27.00	25.00	25.60	27.00	24.00	87.00	87.00	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.00
AV.	27.00	27.00	25.435	25.817	27.00	24.457	89.236	89.236	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.382
HL	27.00	27.00	26.00	26.60	27.00	25.00	91.125	91.125	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.625
LO.	27.00	27.00	25.00	24.60	27.00	24.00	87.00	87.00	13.50	13.30	10.00	10.50	11.35	11.75	28.10	33.00	90.00

* Where split quotations prevail the daily average price is listed. The highs and lows for the month take into consideration the levels reached at both sides of such ranges.

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British Metal Markets

(Continued from Page 12)

immediate effect on price levels, but subsequently further easiness developed.

Zinc Lacks Confidence

Zinc has continued rather under a cloud in the absence of any development in recent weeks to restore confidence in the outlook.

Although at the U. S. Tariff Commission's hearings in Washington the application for substantially higher duties and import quotas met with quite a bit of opposition, the impression still prevails here that increased duties are likely to be recommended, and this has continued to have a rather depressing effect on open market prices. These have sagged to the lowest level seen since 1953, and are certainly unsatisfactory to the majority of the world's producers.

Presumably this will, in turn, further restrict output, but unfortunately with an unsatisfactory level of demand in the U. S. A. and the prospect of U. S. stockpile purchases coming to an end fairly early in 1958, the global situation still looks a little topheavy. Consumers, in consequence, are only inclined to cover their bare minimum requirements.

The brass trade here is feeling a

little happier now that the motor car industry is operating at a record rate, but since it consumed nearly 8,000 tons less zinc in the first nine months of the year than in the same period of 1956, it is very doubtful whether it will make up this amount of leeway. Overall, however, in the first three-quarters of the year total U. K. consumption was only down about 2,500 tons and both galvanizing and die casting showed some gain over last year.

Washington Report

(Continued from Page 5)

will parallel its rapid expansion in the eleven years since World War II.

Scrap Metal Yield

About a fifth of all the iron, steel, copper and aluminum metal that goes into America's metalworking factories comes out of scrap, according to a report released November 21 by the Business and Defense Services Administration. The report, "Industrial Scrap Generation," the first detailed study ever made on the subject, was based on a nationwide survey of manufacturers in the various metalworking industries.

Titanium Industry

Cutbacks in aircraft production present a continuing problem for pro-

ducers and fabricators of titanium, the BDSA reported December 6. Production of mill products has slumped from 2,248 tons in the 1957 first quarter to 1,105 tons in the 1957 third quarter, and the trend still is down.

Mercury Sales to Gov't

The General Services Administration extended from December 31, 1957, to March 31, 1958, the delivery deadline for shipments under the Government's current domestic and Mexican quicksilver purchase program. Under the domestic program ending December 31, 1957, the GSA can acquire up to 125,000 flasks. The program has been extended for another year, until December 31, 1958, but the GSA is authorized to purchase only 30,000 flasks. Domestic producers had been seeking to expedite sales to the Government under the 1957 quota but they encountered difficulty in meeting Government specifications concerning the flasks in which the quicksilver is to be packed.

In view of the timing problem caused by the shortage of proper flasks, the GSA will permit delivery of quicksilver on which tenders were made on or before December 31, 1957, to be made no later than March 31, 1958, if such tenders certify the metal is physically available for delivery except for the packaging requirements.

Lead Brands

Refined At

Federal, Ill., U. S.
Carteret, N. J., U. S.
Monterrey, Mexico
Port Pirie, Australia
Indianapolis, Ind., U. S.

Braubach a/Rhein, Germany

Idaho, U. S.
Orya, Peru
Collinsville, Ill., U. S.

Monterrey, N. L., Mexico
Alton, Ill., U. S.
Oker, Germany
Joplin, Mo., U. S.
Kamiooka, Japan
Stolberg, Rhineland, Germany
Federal, Ill., U. S.

Chicago, Ill., U. S.
Hoboken, Belgium
Alton, Ill., U. S.
Omaha, Neb., U. S.
Monsanto, Ill., U. S.
Monteponi, Italy
San Gavino Monreale, Sardinia, Italy

Hammond, Ind., U. S.

Omaha, Neb., U. S.
Overpelt, Belgium

Megrine, Tunisia
Penarroya, Sopwith & Cartagena, Spain

Perth Amboy, N. J., U. S.
Genoa, Italy
Alton, Ill., U. S.
Collinsville, Ill., U. S.
Selby, Calif., U. S.
Trail, B. C., Canada
Baelen-Usines, Belgium

Mexico, Yugoslavia
Perth Amboy, N. J., U. S.
Hoboken, Belgium
Midvale, Utah, U. S.
E. Chicago, Ind., U. S.
Norfolk, Va., U. S.
Staten Island, N. Y., U. S. A.
Newark, N. J., U. S. A.
Philadelphia, Pa., U. S. A.

*Deliverable against Commodity Exchange, Inc., Lead Contracts without Certificate of Assay.

**Subsidiary of the American Metal Co., Ltd.

†Deliverable against Commodity Exchange, Inc., Lead Contracts with Certificate of Assay of one of the Official Assayers of the Exchange.

‡Subsidiary of National Lead Co.

Producer

American Smelting & Refining Co.
United States Metals Refining Co.
American Smelting & Refining Co.
Broken Hill Associated Smelters
National Lead Co., American Lead Plant*

Blei-und Silberhütte Braubach

Bunker Hill Smelter
Cerro de Pasco Copper Corp.
St. Louis Smelting & Refining Co.

Compania Metalurgica Penoles, S.A.
St. Joseph Lead Company
Unterharzer Berg- und Huttenwerke
Eagle-Picher Mining & Smelting Co.
Mitsui Mining Co.

Stolberger Zinc Aktiengesellschaft für Bergbau und Hattenbetrieb
American Smelting & Refining Co.
Goldsmith Bros. Smelting & Refining Co.
Societe Generale Metallurgique de Hoboken
St. Joseph Lead Company
International Smelting & Refining Co.
Lewin-Mathes Co.
Societa di Monteponi
Montevecchio Societa Italiana del Piombo e dello Zinco

Metals Refining Company

American Smelting & Refining Co.
Compagnie des Metaux d'Overpelt-Lommel et de Corphalie, S.A.

Ste. Min. & Metall. de Penarroya
Ete Min. & Met. de Penarroya

American Smelting & Refining Co.
Societa di Pertusola
St. Joseph Lead Company
St. Louis Smelting & Refining Co.
American Smelting & Refining Co.
Consolidated Mining & Smelting Co. of Canada, Ltd.
Ste des Mines and Foundries de Zinc de la Vieille-Montagne Anglem

Central European Mines, Limited
American Smelting & Refining Co.
The Tsumeb Corporation
United States Smelting, Refining & Mining Company
United States Smelting, Refining & Mining Company
Virginia Lead Smelting Corp., The
Nassau Smelting & Refining Co.
Hudson Smelting & Refining Co.
Bera & Co., Inc.

Brand Mark

*ALTON
**A M CO
*ASARCO MONTERREY
*B.H.A.S.
†BLUE ARROW AMERICAN
LEAD CORP
*Braubach dopp.
raff. Deutschland
*BUNKER "C" HILL
*CERRO PERU
†CHEMICAL
ST. L. S. & R. CO.
**C.M.F. y A.M.
*DOE RUN
*HARZ 99.985, HARZ 99.9
*EAGLE-PICHER
*E.M.K.
*Eschweiler raffine
*FEDERAL
†G B
*H.E.R. Escout
*HERCULANEUM
*ILR
†MONSANTO
*Monteponi
*Montevecchio

†M R CO METALS REFINING

CO.
*OMAHA & GRANT
*Overpelt extra-raffine
O.V.-L.L.-Dur.
*Penarroya
*Penarroya

*PERTH AMBOY
*Pertusola
*ST. JOE
†ST. L. S. & R. CO.
*SELBY
*TADANAC
*Three Stars
Vieille-Montagne Bar
*TRECA
*TSUMCO
*TSUMCO
*USS CO
*U S S CO ELECTRO
†VIRGINIA
Nassau Blue
Hudson
Schuykili

Copper Statistics Reported by Copper Institute

Combined Totals in U. S. A. and Outside U. S. A.

		(In tons of 2,000 pounds)				Stock Increases or Decreases		
		Crude Production		Refined Production	Deliveries to Customers	Refined Stock End of Period	Blister	Refined Total
		Primary	Secondary					
1955 Total	....	2,613,662	133,065	2,728,309	2,744,391	221,331	+ 18,418	+ 11,112
1956								
Nov.	.....	249,360	10,204	254,377	239,181	345,181	+ 5,187	+ 16,416
Dec.	.....	236,512	13,124	250,173	237,003	354,420	+ 537	+ 8,702
Total	.....	2,862,839	152,536	2,987,060	2,830,407	354,420	+ 28,415	+ 161,402
1957								
Jan.	.....	240,790	15,514	256,729	263,014	344,972	- 245	- 9,693
Feb.	.....	235,679	10,577	242,952	214,796	370,128	+ 3,304	+ 28,460
Mar.	.....	244,407	11,850	264,649	263,271	369,256	- 8,392	- 9,264
Apr.	.....	234,909	12,369	252,857	253,295	363,463	- 5,579	- 11,372
May	.....	249,564	10,456	275,323	256,379	376,761	- 15,303	- 2,005
June	.....	252,249	9,671	251,802	220,052	402,294	+ 10,119	+ 33,652
July	.....	224,304	7,403	239,365	204,035	430,301	+ 7,658	+ 22,349
Aug.	.....	226,891	9,665	231,669	231,300	424,612	+ 5,187	- 624
Sept.	.....	234,981	7,562	226,737	225,038	418,929	+ 14,621	+ 8,938
Oct.	.....	254,845	9,726	266,938	246,290	427,991	- 2,733	+ 6,329
Nov.	.....	253,675	8,638	258,242	255,495	425,678	+ 4,071	+ 1,758

In U. S. A.

1955 Total	....	1,036,702	124,760	1,467,448	1,446,354	61,554	.....	+ 14,446
1956								
Nov.	.....	90,573	8,940	132,970	114,524	116,516	.....	+ 10,396
Dec.	.....	92,231	12,352	129,839	99,594	120,645	.....	+ 4,129
Total	.....	1,133,134	139,584	1,580,287	1,465,899	120,645	.....	+ 50,091
1957								
Jan.	.....	94,783	14,683	139,150	119,925	118,564	.....	- 2,081
Feb.	.....	92,508	8,941	134,291	101,565	136,502	.....	+ 17,938
Mar.	.....	96,363	10,355	143,961	113,571	140,191	.....	+ 3,689
Apr.	.....	98,910	11,160	144,013	116,716	139,842	.....	- 349
May	.....	96,334	9,618	151,045	120,336	155,365	.....	+ 15,523
June	.....	95,893	8,792	134,270	101,993	165,549	.....	+ 10,184
July	.....	86,141	6,386	127,434	84,702	191,515	.....	+ 25,966
Aug.	.....	89,680	9,246	128,480	107,522	192,931	.....	+ 1,416
Sept.	.....	87,260	6,925	117,078	102,925	176,813	.....	- 16,118
Oct.	.....	93,078	9,029	129,832	114,203	166,976	.....	- 9,837
Nov.	.....	89,253	8,011	128,371	106,815	161,552	.....	- 5,424

Outside U. S. A.*

1955 Total	....	1,576,960	8,305	1,260,861	1,298,037	159,777	.....	- 21,752
1956								
Oct.	.....	160,333	1,303	127,373	120,727	227,832	.....	+ 11,683
Nov.	.....	158,787	1,264	121,407	124,657	228,665	.....	+ 833
Dec.	.....	144,281	772	120,334	137,409	233,775	.....	+ 5,110
Total	.....	1,729,705	12,952	1,406,773	1,364,508	233,775	.....	+ 73,998
1957								
Jan.	.....	146,097	831	117,579	143,089	226,408	.....	- 7,367
Feb.	.....	143,171	1,636	108,661	113,231	233,626	.....	+ 7,218
Mar.	.....	148,044	1,495	120,688	149,700	229,065	.....	- 4,561
Apr.	.....	135,999	1,209	108,844	136,579	223,621	.....	- 5,444
May	.....	153,230	838	124,278	136,043	221,396	.....	- 2,220
June	.....	156,356	879	117,531	118,059	234,745	.....	+ 13,349
July	.....	138,163	1,017	111,931	119,333	238,786	.....	+ 4,041
Aug.	.....	137,211	719	103,189	123,778	231,681	.....	- 7,227
Sept.	.....	147,711	637	110,659	122,113	242,116	.....	+ 10,435
Oct.	.....	161,767	697	137,106	132,087	261,015	.....	+ 18,899
Nov.	.....	164,422	627	129,871	148,680	264,126	.....	+ 3,111

* Excluding Russia, Yugoslavia, Norway, Sweden, Japan and Australia.

Electrolytic Copper

Producers' Price, Del. Valley
Monthly Average Prices
(Cents Per Pound)

	1954	1955	1956	1957
Jan.	29.88	30.24	43.00	36.00
Feb.	29.88	33.00	44.03	33.318
Mar.	29.93	33.222	46.00	32.00
Apr.	29.98	36.00	46.00	32.00
May	30.00	36.00	46.00	32.00
June	30.00	36.00	46.00	30.955
July	30.00	36.00	41.56	29.25
Aug.	30.00	37.81	40.00	28.639
Sept.	30.00	43.00	40.00	27.031
Oct.	30.00	43.00	39.308	27.00
Nov.	30.00	43.00	36.00	27.00
Dec.	30.00	43.00	36.00	....
Ave.	29.27	37.522	41.992	....

Electrolytic Copper

Custom Smelters' Price, Del. Valley
Monthly Average Prices
(Cents Per Pound)

	1954	1955	1956	1957
Jan.	29.75	30.48	50.22	34.87
Feb.	29.75	33.00	52.07	32.273
Mar.	29.866	33.667	53.11	30.952
Apr.	29.965	36.00	48.88	31.24
May	30.00	36.00	44.221	30.163
June	30.00	36.00	40.00	29.60
July	30.00	36.00	38.14	28.39
Aug.	30.00	40.14	39.32	27.862
Sept.	30.00	50.00	39.00	25.948
Oct.	30.00	45.99	37.192	25.722
Nov.	30.00	45.84	35.96	25.435
Dec.	30.00	49.42	35.45	....
Aver.	29.944	39.38	42.797	....

Lake Copper

Producers' Price Delivered
Monthly Average Prices
(Cents Per Pound)

	1954	1955	1956	1957
Jan.	30.00	30.12	43.00	36.00
Feb.	30.00	33.00	43.783	33.182
Mar.	30.00	33.56	46.00	32.00
Apr.	30.00	36.00	46.00	32.00
May	30.00	36.00	46.00	32.00
June	30.00	36.00	46.00	30.90
July	30.00	36.00	41.68	29.25
Aug.	30.00	37.46	40.00	28.611
Sept.	30.00	43.00	40.00	27.00
Oct.	30.00	43.00	39.321	27.00
Nov.	30.00	43.00	36.00	27.00
Dec.	30.00	43.00	36.00	....
Aver.	30.00	37.51	41.975	....

Fabricators' Copper Statistics

(In tons of 2,000 pounds)

	Fabricators' Stocks of Refined Cop.	Unfilled Purchases of Refined by Fab. from Producers	Fabricators' Working Stocks	Unfilled Sales by Fabricators to Customers	Actual Copper Consumed by Fabricators	Excess Fabricators' Stocks Over Orders Bkd.
1951						
Total	280,402	32,147	295,385	303,050	1,391,477	-285,886
1952						
Total	331,499	32,652	292,157	275,608	1,391,477	-203,614
1953						
Total	380,881	25,022	309,664	170,917	1,375,869	-74,678
1954						
Total	360,526	58,125	304,619	136,581	1,231,840	-22,549
1955						
May	327,343	111,715	309,219	323,279	113,801	-102,440
June	327,696	126,703	309,972	234,578	133,386	-90,151
July	312,587	165,505	301,048	286,095	75,846	-109,051
Aug.	304,097	150,854	303,089	283,653	98,856	-131,791
Sept.	334,996	133,391	314,111	270,102	114,647	-115,826
Oct.	353,469	135,075	313,048	275,255	116,351	-99,759
Nov.	373,314	139,855	313,779	283,953	123,355	-84,563
Dec.	389,974	139,094	314,145	293,264	127,715	-78,341
Total	.....	.....	.....	.....	1,418,241	.....
1956						
Jan.	376,753	143,815	312,128	305,942	138,600	-97,502
Feb.	388,823	135,637	319,279	282,314	130,973	-77,133
Mar.	392,143	140,348	319,056	291,465	133,609	-78,030
Apr.	413,979	135,071	319,247	266,239	121,961	-36,436
May	435,083	131,023	318,592	249,352	124,727	-1,838
June	451,126	114,223	324,970	227,097	113,835	+13,282
July	465,015	109,040	334,584	220,810	81,275	+18,661
Aug.	457,679	115,295	338,818	221,975	117,427	+12,181
Sept.	445,679	114,981	338,488	204,154	115,867	+18,018
Oct.	440,706	112,893	336,856	198,517	119,440	+18,226
Nov.	435,216	110,792	335,829	178,814	119,441	+31,365
Dec.	437,187	117,601	336,217	183,834	99,223	+34,737
Total	.....	.....	.....	.....	1,416,378	.....
1957						
Jan.	435,635	107,231	335,944	178,326	119,517	+28,596
Feb.	422,266	110,174	334,542	178,913	114,298	+18,985
Mar.	429,410	104,551	338,454	164,623	106,170	+30,884
Apr.	429,708	98,638	335,921	164,410	117,041	+28,015
May	434,852	92,943	336,697	170,476	115,355	+20,622
June	426,905	82,919	340,743	153,042	110,527	+16,039
July	432,918	85,728	341,684	144,410	77,991	+32,552
Aug.	429,627	82,768	344,315	144,375	110,323	+23,826
Sept.	425,168	80,436	344,530	144,538	106,927	+16,536
Oct.	420,130	80,774	341,869	138,420	119,161	+20,615

Scrap Copper Receipts by Custom Smelters and Refineries in United States*

	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Jan.	10,172	17,084	15,763	6,640	4,528	6,486	9,859	11,047	14,322	17,506
Feb.	11,890	20,238	12,500	5,153	3,633	10,337	8,490	15,198	14,497	11,145
Mar.	11,954	20,678	13,538	7,912	5,243	19,991	9,738	12,198	15,921	13,934
Apr.	15,125	15,968	12,304	8,553	6,214	16,583	9,004	13,162	17,233	14,288
May	16,357	14,237	8,749	8,458	8,033	10,857	8,687	15,133	20,805	12,397
June	11,178	8,809	20,523	8,628	4,425	10,945	13,309	14,765	14,758	11,949
July	8,370	7,782	10,040	6,642	5,188	9,063	10,610	9,988	12,632	8,926
Aug.	17,081	8,246	10,432	6,113	5,093	7,137	10,100	12,197	12,510	11,645
Sept.	16,001	10,960	4,903	3,561	4,667	9,042	10,641	15,037	9,518	9,756
Oct.	10,854	6,401	9,479	3,336	4,602	10,065	11,662	12,897	15,570	13,151
Nov.	7,625	15,347	9,237	3,179	4,724	7,815	10,879	9,865	11,369	11,146
Dec.	11,826	10,533	7,178	4,538	6,208	11,476	14,876	13,180	14,613	.....
Total	147,931	156,303	142,067	71,812	62,470	129,798	127,449	154,714	173,748	.....

* As compiled by Copper Institute.

Brass and Bronze Ingot Monthly Shipments (Net Tons)

The following figures showing the combined shipments of ingot brass and bronze are compiled by the Ingot Brass and Bronze industry and represent in excess of 95 per cent of the deliveries of the entire industry.

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Jan.	27,841	26,998	19,456	18,874	28,415	28,315	24,423	20,661	25,201	27,736	25,681
Feb.	24,686	22,487	15,026	18,487	27,168	24,211	25,429	19,920	25,349	24,949	20,769
Mar.	17,477	24,282	14,550	22,494	31,997	23,890	28,256	23,653	29,713	28,310	21,948
Apr.	24,577	25,177	10,695	22,118	30,472	22,547	25,044	24,746	27,641	25,808	23,507
May	19,526	23,716	11,114	23,643	33,267	21,740	21,660	22,269	23,708	23,437	22,037
June	16,929	24,401	9,696	25,093	33,817	21,274	20,818	22,348	23,141	18,842	18,888
July	16,728	20,456	10,220	21,609	32,016	18,947	19,321	17,074	18,513	17,364	16,695
Aug.	18,589	24,098	14,194	26,689	25,285	21,807	20,156	21,684	27,018	23,812	19,654
Sept.	19,025	23,641	16,208	28,811	22,285	22,770	21,463	22,464	26,349	20,929	19,670
Oct.	22,806	21,559	18,026	32,240	23,124	25,811	22,280	24,080	25,228	23,045	.....
Nov.	21,666	21,731	18,488	31,748	23,544	23,441	21,860	23,061	25,102	21,818	.....
Dec.	23,863	20,954	17,960	28,575	20,987	22,983	20,541	21,274	21,448	18,046	.....
Total	263,711	279,500	175,643	303,563	332,378	277,736	271,251	263,233	298,406	274,096	.....
Aver	21,976	23,292	14,637	25,297	27,615	23,145	22,604	21,936	24,867	22,841	.....

METALS, DECEMBER, 1957

Mine Production of Copper in United States

(U. S. Bureau of Mines)
(In short tons)

	Eastern	(In short tons) Missouri	Western	Total
1953				
Ttl.	38,900	2,374	885,174	926,448
1954				
Ttl.	40,302	1,925	793,241	835,472
1955				
Ttl.	68,622	2,140	921,838	992,600
1956				
May	6,960	191	92,531	99,682
June	6,720	173	88,049	94,942
July	6,132	185	74,283	80,600
Aug.	6,638	219	85,224	92,067
Sept.	6,195	163	78,934	85,292
Oct.	6,405	183	87,102	93,690
Nov.	6,498	150	81,984	88,632
Dec.	6,603	150	80,452	87,205
Ttl.	79,681	2,130	1,018,496	1,100,307
1957				
Jan.	6,607	172	86,431	93,210
Feb.	6,082	163	84,011	90,256
Mar.	6,714	196	88,257	95,167
Apr.	6,579	237	86,627	94,443
May	7,198	200	85,876	93,274
June	7,793	129	82,398	90,320
July	6,101	154	78,502	84,757
Aug.	7,572	133	79,892	87,038
Sept.	6,083	132	79,623	85,338

Average Custom Smelters' Scrap Buying Prices

(Cents per pound for carload lots del. consumers' works)

	No. 1 Copper Scrap	No. 2 Copper Scrap	Light Copper Scrap	Refinery Brass*
1955				
Av.	37.035	35.535	33.59	32.70
1956				
Sept.	33.56	32.06	29.81	29.92
Oct.	30.964	29.464	27.214	27.44
Nov.	30.51	29.01	26.76	27.50
Dec.	30.423	28.923	26.673	27.42
Av.	36.25	34.75	32.33	32.47
1957				
Jan.	29.30	27.80	25.55	26.30
Feb.	26.47	24.97	22.72	23.75
Mar.	26.58	25.08	22.83	24.52
Apr.	26.895	25.395	23.145	24.695
May	25.985	24.485	22.235	23.735
June	25.353	23.853	21.603	23.35
July	24.21	22.71	20.46	22.03
Aug.	23.26	21.76	19.51	21.29
Sept.	21.198	19.698	18.948	18.964
Oct.	21.28	19.78	17.53	19.00
Nov.	21.293	19.793	17.543	19.10

* Of dry content for material having a dry copper content in excess of 60%.

Brass Ingot Makers' Scrap Copper Buying Prices

(Average Prices)
(Cents per pound del. refinery for 60,000 lbs. of each grade)

	No. 1 Copper Scrap	No. 2 Copper Scrap	No. 1 Composition	Heavy Yellow Brass
1955				
Av.	36.63	35.02	29.905	22.35
1956				
Sept.	33.26	32.25	30.07	20.92
Oct.	30.687	29.187	28.058	19.538
Nov.	30.39	28.89	26.69	18.91
Dec.	30.195	28.695	27.50	18.96
Av.	36.17	34.67	30.483	21.34
1957				
Jan.	29.27	27.77	26.59	18.55
Feb.	26.47	24.97	23.50	16.65
Mar.	26.58	25.08	22.83	17.40
Apr.	26.895	25.395	23.50	17.50
May	25.985	24.485	23.144	17.144
June	25.353	23.853	22.83	16.65
July	24.21	22.71	22.01	15.71
Aug.	23.26	21.76	21.56	15.63
Sept.	21.198	19.698	18.635	15.563
Oct.	21.28	19.78	19.067	13.24
Nov.	21.293	19.793	19.043	12.913

United States Lead Statistics of Primary Refineries

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	Stock At Beginning	Production Primary & Secondary	Total Supply	Stock At End	Domestic Shipments
1953	43,560	533,883	577,443	81,152	488,437
1954	81,152	551,618	632,770	92,719	475,551
1955	28,855	547,153	639,872	31,089	531,339
1956					
January	31,089	51,306	82,395	32,469	49,746
February	32,469	49,475	81,944	41,450	39,411
March	41,450	54,174	95,624	52,089	39,344
April	53,089	52,976	105,065	53,958	44,986
May	53,958	47,961	101,919	50,460	40,703
June	50,460	47,367	97,827	45,951	41,455
July	45,951	48,479	94,430	49,134	36,483
August	49,134	48,404	97,538	39,304	48,404
September	39,304	53,530	92,834	40,542	47,519
October	40,542	54,815	95,357	42,314	45,254
November	42,314	50,744	93,058	37,192	47,349
December	37,192	54,063	91,254	41,181	44,191
Total		613,293	644,382		529,484
1957					
January	41,181	50,854	92,035	42,905	40,549
February	42,905	48,102	90,917	48,699	37,517
March	48,699	52,357	101,056	46,184	38,225
April	46,184	56,170	102,354	57,444	37,583
May	57,444	51,718	109,162	58,085	35,334
June	58,085	48,203	106,288	64,861	37,257
July	64,861	47,100	111,961	68,009	38,582
August	68,009	48,191	116,200	60,633	49,406
September	60,633	50,436	111,069	54,682	51,859
October	54,682	52,041	106,723	59,041	40,447

In instances where the figures are not in balance it is due to shipments to other than domestic consumers.

Lead Prices at New York

(Common Grade)

	Monthly Average Prices (Cents per pound)			
	1954	1955	1956	1957
Jan.	13.26	15.00	16.16	16.00
Feb.	12.82	15.00	16.00	16.00
Mar.	12.94	15.00	16.00	16.00
Apr.	13.91	15.00	16.00	16.00
May	14.00	15.00	16.00	15.385
June	14.11	15.00	16.00	14.32
July	14.00	15.00	16.00	14.00
Aug.	14.06	15.00	16.00	14.00
Sept.	14.60	15.12	16.00	14.00
Oct.	14.975	15.50	16.00	13.704
Nov.	15.00	15.50	16.00	13.50
Dec.	15.00	15.56	16.00	....
Av.	14.06	15.14	16.013	....

Lead Sheet Prices

(To Jobbers, Full Sheets)

	Monthly Average Prices (Cents per pound)			
	1954	1955	1956	1957
Jan.	18.26	20.00	21.66	21.50
Feb.	17.82	20.00	21.50	21.50
Mar.	17.94	20.00	21.50	21.50
Apr.	18.91	20.00	21.50	21.50
May	19.00	20.00	21.50	20.885
June	19.11	20.00	21.50	19.82
July	19.00	20.00	21.50	19.50
Aug.	19.06	20.00	21.50	19.50
Sept.	19.60	20.12	21.50	19.50
Oct.	19.975	20.50	21.50	19.204
Nov.	20.00	20.50	21.50	19.00
Dec.	20.00	20.56	21.50	....

Battery Shipments

The following table shows replacement battery shipments in the United States as compiled by the Business Information Division of Dun & Bradstreet, Inc., for the Association of American Battery Manufacturers:

(In thousands of units)

	1954	1955	1956	1957
Jan. ..	1,836	1,518	2,058	2,638
Feb. ..	1,461	1,691	1,340	1,960
Mar. ..	1,226	1,356	1,348	1,254
Apr. ..	1,180	1,315	1,368	1,178
May ..	1,429	1,614	1,761	1,604
June ..	1,883	1,842	1,807	1,878
July ..	2,350	2,078	2,178	2,469
Aug. ..	2,548	2,852	2,571	2,855
Sept. ..	2,800	3,120	2,711	2,692
Oct. ..	2,739	3,120	3,015	....
Nov. ..	2,475	2,697	2,592	....
Dec. ..	1,844	2,625	2,265	....
Totals	23,771	25,828	25,014	....

METALS, DECEMBER, 1957

Industrial Classification of Domestic Lead Shipments

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	Cable	Amm.	Foil	Batt'y	Brass Making	Sun- dries	Job- bers	Unclassi- fied
1952	74,616	30,809	1,374	77,238	5,160	50,943	5,671	246,283
1953	76,283	34,415	2,136	80,339	5,716	55,936	6,390	227,222
1954	75,412	30,246	2,811	66,088	5,192	57,369	9,170	229,264
1955								
Apr.	5,909	2,625	201	6,533	463	5,178	1,234	22,735
May	6,145	2,950	251	8,127	321	4,435	1,145	22,756
June	6,623	950	50	6,833	290	5,175	1,293	23,816
July	2,313	150	307	4,365	100	3,763	946	14,603
Aug.	5,772	2,800	210	4,794	290	3,741	1,230	22,632
Sept.	6,552	2,295	415	7,794	354	4,711	1,149	22,980
Oct.	6,772	3,026	85	9,819	564	4,899	1,287	25,610
Nov.	6,606	2,433	70	13,875	387	3,795	874	23,330
Dec.	6,275	3,260	35	7,508	449	4,289	839	25,516
Total	72,418	27,599	2,622	88,461	3,960	52,994	13,034	270,251
1956								
Jan.	7,777	3,075	200	6,555	290	8,538	917	22,394
Feb.	5,974	2,435	384	5,983	275	3,592	871	19,897
Mar.	6,786	1,300	101	4,903	321	3,915	1,331	20,687
Apr.	6,744	2,950	310	4,839	260	3,522	1,376	24,985
May	6,490	2,825	...	5,027	131	3,513	964	21,753
June	8,502	2,150	...	4,167	186	3,645	1,021	21,787
July	3,497	904	...	5,007	80	2,859	1,453	22,683
Aug.	7,712	1,497	85	6,334	713	4,443	1,262	26,358
Sept.	6,354	1,850	135	6,303	230	5,038	1,339	26,270
Oct.	7,988	1,715	135	7,108	286	4,955	1,493	21,574
Nov.	6,096	2,351	...	8,556	226	5,573	792	23,755
Dec.	6,440	1,449	85	5,832	160	7,258	394	22,573
Total	80,360	24,501	1,435	70,614	3,158	56,851	13,213	274,716
1957								
Jan.	5,297	2,800	200	6,886	671	4,002	1,191	19,502
Feb.	5,103	1,450	350	6,549	508	4,820	625	18,112
Mar.	5,956	752	...	6,479	686	4,614	1,064	18,674
Apr.	6,731	2,250	...	6,242	909	2,958	1,040	17,453
May	6,976	2,200	120	4,705	270	3,871	634	16,558
June	3,726	2,250	75	3,762	666	5,071	1,087	20,620
July	5,249	1,650	105	5,332	566	5,310	1,110	19,260
Aug.	5,406	2,250	220	6,165	650	6,246	1,403	27,066
Sept.	4,880	2,700	295	6,722	850	5,782	891	29,739
Oct.	3,671	3,300	205	5,973	881	4,203	847	21,367

Lead Stocks at Primary U. S. Smelters and Refiners

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	In ore and matte and in process at smelters	— In base bullion (lead content) — At smelters & refineries	In transit to refineries	In process at refineries	Refined pig lead	Anti- monial lead	Total Stocks
1955							
Oct. 1	70,628	19,083	4,217	28,424	23,292	7,461	153,105
Nov. 1	71,257	20,632	4,276	28,596	21,828	8,085	154,724
Dec. 1	64,109	20,232	4,377	27,486	19,592	9,263	145,059
1956							
Jan. 1	71,812	16,532	3,764	27,625	21,196	9,893	150,822
Feb. 1	70,690	19,082	1,764	25,632	24,080	8,389	149,637
Mar. 1	71,023	16,406	2,583	27,519	32,355	9,095	158,981
Apr. 1	72,358	15,655	2,152	28,065	41,800	10,289	170,319
May 1	74,837	15,500	2,718	24,181	43,268	10,690	171,194
June 1	78,987	15,477	2,475	26,682	39,558	10,902	174,081
July 1	81,796	15,837	4,423	28,505	36,499	9,452	176,512
Aug. 1	76,985	16,856	3,516	29,603	38,210	10,924	176,094
Sept. 1	81,634	18,529	2,874	29,991	29,230	10,074	172,332
Oct. 1	77,787	15,991	4,413	28,083	29,361	11,181	166,816
Nov. 1	78,253	12,022	3,083	25,783	30,932	11,382	161,485
Dec. 1	82,197	9,095	4,132	25,627	25,360	11,832	158,243
1957							
Jan. 1	77,918	12,222	2,846	25,092	29,435	11,746	159,249
Feb. 1	80,451	10,636	4,061	25,827	32,418	10,487	163,880
Mar. 1	81,274	11,880	4,394	25,728	38,479	10,220	171,975
Apr. 1	82,461	14,598	3,593	25,401	36,390	9,794	172,237
May 1	81,061	17,035	2,705	20,890	48,053	9,391	179,135
June 1	81,364	11,585	3,071	21,002	48,286	9,799	175,107
July 1	82,730	12,036	3,560	22,380	55,358	9,503	185,567
Aug. 1	97,111	11,479	2,532	22,917	59,348	8,661	202,048
Sept. 1	84,205	13,029	2,667	22,439	51,080	9,553	182,973
Oct. 1	80,662	11,905	3,175	20,351	44,467	10,215	170,775
Nov. 1	76,230	14,220	2,538	18,695	47,460	11,581	170,724

Receipts of Lead in Ore and Scrap

By U. S. Smelters (a)

(American Bureau of Metal Statistics)

(In tons of 2,000 lbs.)

	Receipts of lead in ore			Receipts of lead in scrap etc. (b)	Total receipts in ore, & scrap
	United States	Foreign	Total		
1952 Total	405,990	98,276	504,266	41,845	546,111
1953 Total	351,183	155,788	506,971	42,994	549,965
1954 Total	336,291	158,081	494,372	49,864	544,236
1955					
October	30,073	20,845	50,918	5,655	56,573
November	27,736	13,022	40,758	3,802	44,560
December	29,363	24,136	53,499	3,150	56,649
Total	341,595	172,966	514,561	42,996	557,557
1956					
January	27,184	15,704	42,888	6,346	49,234
February	28,569	16,528	45,097	4,577	49,674
March	31,568	17,904	49,472	3,989	53,461
April	31,786	15,224	47,010	4,252	51,262
May	32,715	18,476	51,191	4,711	55,902
June	31,546	16,251	47,797	4,541	52,338
July	29,964	13,476	43,440	3,207	46,647
August	31,112	20,726	51,838	5,885	57,723
September	28,731	16,276	45,007	3,351	48,358
October	33,614	12,350	45,964	5,439	51,403
November	30,553	14,308	44,861	5,141	50,002
December	31,154	15,095	46,252	4,536	50,788
Total	368,499	192,318	560,817	55,925	616,792
1957					
January	30,632	19,961	50,593	4,471	55,064
February	31,410	15,059	46,469	4,564	51,033
March	33,445	18,813	52,258	3,058	55,316
April	31,343	13,042	44,385	2,848	47,233
May	32,138	12,324	44,462	3,431	47,893
June	29,896	19,592	49,488	2,272	51,760
July	29,585	17,936	47,521	2,893	50,414
August	29,225	18,774	47,999	3,190	51,189
September	26,479	13,757	40,236	4,375	44,611
October	29,342	13,782	43,124	4,386	47,510

(a) Receipts of lead in ore are computed on the basis of recoverable lead. Owing to the estimational factor in this, which is probably on the low side, and also to the possibility that some lead receipts may escape attention, these monthly totals probably understate the actual production of pig lead. (b) Inclusive only of scrap smelted in connection with ore, plus some scrap received by primary refiners.

N. Y. Lead Price Changes

(Effective Date)

1949		Mar. 4....13.90
Nov. 16....12.50	Mar. 10....13.50	
Nov. 21....12.00	Apr. 7....13.00	
1950	Apr. 16....12.50	
Mar. 9....11.00	Apr. 21....12.00	
Mar. 14....10.50	Apr. 29....12.50	
Apr. 20....10.75	May 18....12.75	
Apr. 26....11.00	May 19....13.00	
May 4....11.25	May 26....13.15	
May 10....11.50	June 11....13.50	
May 11....12.00	July 20....13.75	
June 23....11.50	July 23....14.00	
1951	Sept. 16....13.50	
June 28....11.00	1954	
July 12....11.50	Jan. 18....13.00	
July 13....12.00	Feb. 18....12.50	
Aug. 15....13.00	Mar. 9....12.75	
Aug. 21....14.00	Mar. 10....13.00	
Sept. 1....15.00	Mar. 26....13.25	
Sept. 8....16.00	Mar. 29....13.50	
Oct. 2....19.00	Apr. 1....13.75	
Oct. 31....17.00	Apr. 12....14.00	
1952	June 2....14.25	
Apr. 29....18.00	June 15....14.00	
May 2....17.00	Aug. 25....14.25	
May 12....15.00	Sept. 7....14.50	
June 23....15.50	Sept. 15....14.75	
June 24....16.00	Oct. 4....14.875	
Oct. 7....15.00	Oct. 5....15.00	
Oct. 14....14.00	1955	
Oct. 22....13.50	Sept. 23....15.00-	
Nov. 3....14.00	15.50	
Nov. 10....14.25	Sept. 26....15.50	
Nov. 11....14.50	Dec. 29....16.00	
Nov. 20....14.25	1956	
Nov. 24....14.00	Jan. 4....16.50	
Dec. 22....14.25	Jan. 13....16.00	
Dec. 29....14.50	1957	
Dec. 31....14.75	May 9....15.50	
1953	May 16....15.00	
Jan. 7....14.50	June 11....14.00	
Jan. 12....14.00	Oct. 14....13.50	
Feb. 2....13.50	Dec. 2....13.00	

**OPS Ceiling.

Antimonial Lead Stocks at Primary Refineries

(A.B.M.S.)

	(In tons of 2,000 lbs.)			
End of:	1954	1955	1956	1957
Jan. 14,691	14,902	8,389	10,487	
Feb. 14,798	12,204	9,095	10,220	
Mar. 11,985	12,385	10,289	9,794	
Apr. 11,977	11,740	10,690	9,391	
May 11,882	11,055	10,902	9,799	
June 9,798	10,233	9,452	9,503	
July 12,210	9,779	10,924	8,661	
Aug. 12,279	7,252	10,074	9,553	
Sept. 14,168	7,461	11,181	10,215	
Oct. 14,846	8,085	11,382	11,581	
Nov. 14,573	9,263	11,832	....
Dec. 14,789	9,893	11,746	....

Antimonial Lead Production by Primary Refineries

(A.B.M.S.)

	(In tons of 2,000 lbs.)			
End of:	1954	1955	1956	1957
Jan. 3,768	4,529	5,045	5,113	
Feb. 4,257	4,777	5,888	5,468	
Mar. 4,475	6,202	5,526	5,091	
Apr. 4,470	5,343	5,818	6,183	
May 4,373	4,737	5,405	6,978	
June 3,796	4,792	4,456	4,566	
July 5,991	1,153	3,853	5,372	
Aug. 6,455	2,946	5,343	7,967	
Sept. 5,869	6,650	6,709	7,574	
Oct. 5,532	8,016	5,378	6,148	
Nov. 5,364	7,985	6,993	....
Dec. 5,255	6,907	5,766	....

Total 59,875 64,037 66,180

U. S. Lead Consumption

(Bureau of Mines — In Short Tons)

Metal products:	1957		
	Jan.-Sept.	Aug.	Sept.
Ammunition	32,271	2,602	3,964
Bearing metals	18,936	2,370	2,442
Brass and bronze	18,094	2,101	2,217
Cable covering	88,752	9,592	8,268
Calking lead	48,326	5,822	5,784
Casting metals	9,039	844	746
Collapsible tubes	6,736	775	779
Foil	3,777	683	479
Pipes, traps & bends	17,719	2,171	2,010
Sheet lead	19,793	2,285	2,383
Solder	53,757	6,353	5,964
Storage battery grids, posts, etc.	134,784	17,003	14,628
Storage battery oxides	134,676	17,760	15,344
Terne metal	927	52	164
Type Metal	19,010	2,183	2,135
Total	606,597	72,596	67,307
Pigments:			
White lead	12,738	1,794	1,764
Red lead & litharge	58,919	6,874	6,647
Pigment colors	9,842	1,261	869
Other*	4,605	540	641
Total	86,104	10,469	9,921
Chemicals:			
Tetraethyl lead	128,305	15,056	14,014
Misc. chemicals	2,533	232	247
Total	130,838	15,288	14,261
Misc. uses:			
Annealing	3,497	371	412
Galvanizing	883	70	87
Lead plating	256	16	19
Weights & ballast	4,512	608	631
Total	9,148	1,065	1,149
Other uses unclassified	11,652	1,143	1,056
Total reported ..	†844,339	†100,561	†93,694
Estimated unreported consumption ..	9,000	1,000	1,000
Grand total ..	†853,300	†101,600	†94,700
Daily average† ..	3,126	3,277	3,158

* Includes lead content of leaded zinc oxide production.
† Includes lead content of scrap used directly in fabricated products.
‡ Based on number of days in month without adjustment for Sundays and holidays.

Consumers' Lead Stocks, Receipts and Consumption

(Bureau of Mines — In Short Tons)

	Stocks		Consumed	Stocks Sept. 30 1957
	Aug. 31, 1957	Net Receipts in Sept.	in Sept.	
Soft lead	55,844	66,849	60,935	61,758
Antimonial lead	31,246	25,595	23,618	33,223
Lead in alloys	7,374	3,491	3,624	7,241
Lead in copper-base scrap ..	2,160	1,376	1,848	1,688
Total	96,624	97,311	*90,025	103,910

* Excludes 3,074 tons of lead which went directly from scrap to fabricated products and 595 tons of lead contained in leaded zinc oxide production.

Consumption of Lead by Class of Product

(Bureau of Mines — In Short Tons)

SEPTEMBER

	Soft lead	Antimonial lead	Lead in alloys	Lead in Copper-base scrap	Total
Metal products	35,755	23,049	3,613	1,848	64,265
Pigments	9,309	17	...	...	9,326
Chemicals	14,250	11	...	...	14,261
Miscellaneous	757	392	...	...	1,149
Unclassified	864	149	11	...	1,024
Total	60,935	23,618	3,624	1,848	*90,025

* Excludes 3,074 tons of lead which went directly from scrap to fabricated products and 595 tons of lead contained in leaded zinc oxide production.

U. K. Lead Consumption

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 pounds)

	1955	1956	1957
Jan.	29,062	31,012	29,657
Feb.	28,926	30,125	29,219
Mar.	33,225	30,099	29,441
Apr.	28,656	28,186	27,246
May	31,092	29,752	31,574
June	32,627	31,501	28,607
July	26,994	26,963	27,604
Aug.	26,954	25,077	24,756
Sept.	34,291	30,274	29,519
Oct.	34,121	32,057	32,486
Nov.	34,820	32,036	...
Dec.	29,689	25,963	...
Total ...	370,794	353,045	...

American Antimony

Monthly Average Prices
In bulk, f.o.b. Laredo
(Cents per lb. in ton lots)

	1954	1955	1956	1957
Jan.	28.50	28.50	33.00	33.00
Feb.	28.50	28.50	33.00	33.00
Mar.	28.50	28.50	33.00	33.00
Apr.	28.50	28.50	33.00	33.00
May	28.50	28.50	33.00	33.00
June	28.50	28.50	33.00	33.00
July	28.50	28.50	33.00	33.00
Aug.	28.50	30.66	33.00	33.00
Sept.	28.50	33.00	33.00	33.00
Oct.	28.50	33.00	33.00	33.00
Nov.	28.50	33.00	33.00	33.00
Dec.	28.50	33.00	33.00	...
Aver.	28.50	30.18	33.00	...

Lead Imports and Exports By Principal Countries

(A.B.M.S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted.

	IMPORTS		
	July	Aug.	Sept.
U. S.* (s.t.)	25,224	23,162	...
Canada (s.t.) ..	16	...	...
Denmark	1,119	1,280	2,034
France	1,263	2,285	3,643
Germany, W.† ..	2,464	2,811	...
Italy‡§	1,149	...	...
Netherlands	2,379	2,140	...
Norway	600	...	...
Sweden	900	1,996	...
Switzerland	1,369	1,264	1,372
U. K. (l.t.)	16,608	13,006	4,659
India‡ (l.t.)	1,485	1,140	...

EXPORTS

U. S.* (s.t.)	584	52	...
Canada (s.t.) ...	4,683	6,416	...
Denmark	670	411	753
France	393	1,626	2,992
Germany, W.† ..	1,317	2,192	...
Netherlands	481	674	...
Sweden	786	906	...
Switzerland	3	2	...
Northern Rhodesia‡ (l.t.)	1,024	1,091	...
Australia‡ (l.t.)	10,223	...	...

* Refined.

† Includes scrap.

‡‡ Includes lead alloys.

‡ British Bureau of Non-Ferrous Metal Statistics.

French Lead Imports

(A. B. M. S.)

(In metric tons)

	1957		
	Aug.	Sept.	Oct.
Ore (gross weight)	8,560	7,302	9,931
Italy .....	...	...	525
Algeria	283	563	...
Morocco	8,277	6,739	9,406
Pig lead	2,285	3,643	5,921
Belgium .....	...	640	...
Germany (W.) ..	...	275	275
Algeria	1	...	...
Morocco	1,269	918	3,141
Tunisia	1,015	1,810	2,484
Other countries ...	...	...	21

U. K. Lead Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1957		
	Aug.	Sept.	Oct.
(Gross Weight)			
Lead and lead alloys	13,006	4,659	19,005
Australia	7,719	1,203	15,529
Canada	3,851	1,625	3,076
Belgium .....	...	450	175
Yugoslavia	49	100	175
United States ..	400	...	...
Peru	550	950	50
Other countries	437	331	...

METALS, DECEMBER, 1957

Domestic Zinc Statistics

American Zinc Institute

Commencing with January, 1948, all regularly operating U. S. primary and secondary smelters are included in this report. Production from foreign area also is included.

(Tons of 2,000 lbs.)

	Stock Begin- ning	Pro- duction	Domestic	Shipments			Stock at End	Unfilled Orders at End	Daily Avg. Prod.
				Export & Drawback	Gov't Acct	Total			
1950	TL 94,221	910,354	849,246	18,189	128,256	995,691	8,884	74,795	2,494
1950	Mo. Avg.	75,863	70,770	1,516	10,988	82,974			
1951	TL 8,884	931,833	836,800	42,067	39,949	918,816	21,901	50,509	2,553
1951	Mo. Avg.	77,653	69,733	3,506	3,329	76,568			
1952	TL 21,901	961,480	808,343	56,202	36,626	896,171	87,160	45,264	2,627
1952	Mo. Avg.	80,119	66,945	4,682	3,052	74,481			
1953	TL 180,843	971,191	818,850	16,326	42,332	877,508	180,843	35,466	2,661
1953	Mo. Avg.	80,933	68,238	1,361	3,528	73,126			
1954	TL 124,277	868,242	787,922	27,929	108,957	924,809	124,277	45,862	
Monthly Avg.		72,858	65,660	2,327	9,080	77,067			2,379
1955									
Aug.	51,290	84,874	87,042	885	2,153	90,080	46,084	73,632	2,738
Sept.	46,084	82,448	83,664	1,274	2,427	87,265	42,167	52,778	2,781
Oct.	42,167	89,449	85,770	36	1,942	87,748	42,868	61,746	2,886
Nov.	45,868	86,616	91,585	289	1,561	93,425	35,055	64,660	2,921
Dec.	58,058	92,578	87,010	684	1,963	89,657	40,979	72,908	2,988
Total	40,979	1,031,018	1,007,619	19,497	87,200	1,114,316	40,979	72,908	
Monthly Avg.		85,918	83,968	1,625	7,267	92,860			2,928
1956									
Jan.	40,979	90,813	87,723	1,084	1,155	89,952	41,230	60,717	2,918
Feb.	41,230	86,329	84,727	317	2,782	87,826	39,833	45,255	2,977
Mar.	39,833	91,690	84,204	460	6,821	91,485	40,038	53,070	2,958
Apr.	40,038	88,664	74,789	1,437	4,670	80,795	47,907	46,106	2,955
May	47,907	81,288	69,085	287	10,196	69,568	59,577	84,003	2,920
June	59,577	78,321	58,048	639	15,065	68,672	69,226	45,921	2,611
July	69,226	85,080	84,219	811	14,601	49,531	102,775	53,559	2,686
Aug.	102,775	89,649	70,707	1,285	16,075	85,017	104,307	55,769	2,889
Sept.	104,307	90,235	73,142	984	18,301	92,377	102,165	64,450	3,005
Oct.	102,165	93,493	84,991	465	21,392	106,848	85,810	58,435	3,016
Nov.	88,810	91,808	82,478	787	27,168	110,433	70,185	45,866	3,060
Dec.	70,185	98,234	80,772	671	18,354	99,797	68,622	34,913	3,169
Total		1,062,954	869,270	9,027	157,014	1,035,311			
Monthly Avg.		88,550	72,439	752	13,085	86,275			2,904
1957									
Jan.	68,622	93,452	67,273	450	15,377	83,100	78,974	42,922	3,014
Feb.	78,974	88,078	67,731	1,327	10,905	80,163	86,889	56,421	3,146
Mar.	87,040	96,924	67,441	1,558	25,608	94,607	89,357	56,818	3,127
Apr.	89,357	96,506	55,000	1,411	23,921	80,332	105,531	42,102	3,217
May	105,531	96,835	60,729	2,106	26,858	89,693	112,693	31,539	3,124
June	112,693	90,719	54,275	1,358	14,324	69,957	133,455	28,822	3,024
July	133,455	85,779	57,862	4,497	11,186	73,055	146,179	28,296	2,767
Aug.	149,179	84,168	70,318	860	9,871	81,049	149,296	30,890	2,715
Sept.	149,296	77,455	62,111	530	10,344	72,985	153,766	32,379	2,582
Oct.	153,766	81,492	66,225	372	12,736	79,333	155,935	31,466	2,629
Nov.	155,925	79,754	73,419	581	9,148	83,148	152,531	21,867	2,658

U. S. Consumption of Slab Zinc

Bureau of Mines

By Industries (Short Tons)

	Galvan- izers	Die Casters	Brass products	Rolled zinc	Zinc oxide & other	Total
1949 Total	348,544	197,387	84,257	55,100	17,643	702,931
1950 Total	434,094	281,385	136,451	67,779	27,656	947,365
1951 Total	386,373	266,442	141,456	64,000	28,738	887,009
1952 Total	375,563	236,022	155,311	51,508	30,885	849,289
1953 Total	403,162	305,346	177,301	53,784	38,037	977,636
1954						
Total	398,599	286,817	107,293	45,979	33,342	876,130
1955						
August	38,317	30,168	10,244	5,431	3,027	87,687
September	39,181	31,804	12,672	4,185	3,507	91,849
October	40,030	35,136	13,961	4,714	3,596	97,940
November	38,116	38,616	13,455	3,952	3,636	98,275
December	37,249	36,982	15,003	3,900	3,621	96,755
Total	439,694	404,790	144,816	50,363	39,302	1,081,468
1956						
January	38,148	36,554	13,097	4,442	3,665	95,906
February	37,702	31,274	12,678	3,883	3,325	88,862
March	38,662	31,332	12,889	4,433	3,566	90,882
April	37,092	29,226	12,635	4,010	3,359	86,322
May	38,064	26,003	12,218	3,431	1,260	80,976
June	37,005	21,790	8,351	3,454	1,315	71,915
July	12,960	21,425	5,193	2,187	2,883	45,648
August	33,840	26,814	8,420	4,222	2,959	76,255
September	37,313	26,998	8,370	3,397	3,280	79,358
October	40,875	34,985	10,164	4,158	3,695	93,877
November	36,767	32,812	9,581	3,625	3,539	87,224
December	32,790	33,238	8,799	3,140	3,405	82,272
Total	421,218	352,451	122,395	45,382	36,251	988,097
1957						
January	34,337	37,517	10,800	3,502	3,434	90,490
February	31,686	32,520	9,156	3,284	3,206	80,752
March	30,747	30,946	8,860	3,553	3,378	78,384
April	30,631	29,166	9,491	4,001	3,300	77,489
May	30,537	28,423	9,563	3,389	3,097	75,909
June	29,907	27,688	8,710	3,613	2,646	73,464
July	26,067	26,116	6,361	2,698	2,981	65,123
August	27,885	29,237	9,755	3,686	3,099	74,562

METALS, DECEMBER, 1957

Prime Western Zinc Prices

(Cents per pound)

(In tons of 2,240 pounds)

	1954	1955	1956	1957
Jan.	9.76	11.50	13.46	13.50
Feb.	9.375	11.50	13.50	13.50
Mar.	9.66	11.50	13.50	13.50
Apr.	10.25	11.93	13.50	13.50
May	10.29	12.00	13.50	11.933
June	10.96	12.25	13.50	10.84
July	11.00	12.50	13.50	10.00
Aug.	11.00	12.50	13.50	10.00
Sept.	11.44	12.96	13.50	10.00
Oct.	11.50	13.02	13.50	10.00
Nov.	11.50	13.00	13.50	10.00
Dec.	11.50	13.00	13.50	....
Av.	10.69	12.305	13.497	....

High Grade Zinc Prices

(Delivered)

N. Y. Monthly Averages

(Cents per pound)

	1954	1955	1956	1957
Jan.	11.11	12.85	14.81	14.85
Feb.	10.725	12.85	14.85	14.85
Mar.	11.01	12.85	14.85	14.85
Apr.	11.60	13.28	14.85	14.85
May	11.64	13.35	14.85	13.283
June	12.31	13.60	14.85	12.19
July	12.35	13.85	14.85	11.35
Aug.	12.35	13.85	14.85	11.35
Sept.	12.79	14.31	14.85	11.35
Oct.	12.85	14.37	14.85	11.35
Nov.	12.85	14.35	14.85	11.35
Dec.	12.85	14.35	14.85	....
Av.	12.04	13.655	14.847	....

U. K. Zinc Consumption

British Bureau of Non-Ferrous Metal Statistics

(In Tons of 2,240 Pounds)

	1955	1956	1957
Jan.	29,192	29,779	28,485
Feb.	28,814	29,568	26,276
Mar.	33,451	28,650	27,049
Apr.	27,741	25,348	24,247
May	29,237	27,922	29,589
June ...	31,467	26,650	25,202
July	23,695	23,826	25,934
Aug.	23,261	18,867	20,381
Sept. ...	30,080	25,470	27,792
Oct.	29,460	27,784	....
Nov.	31,516	27,713	....
Dec.	28,683	24,134	....
Total	346,597	315,711	....

Mine Production of Zinc in United States

(U. S. Bureau of Mines)

	(In short tons)		
	Eastern States	Central States	Western States
Total U.S.*			
1952 Total	185,939	94,410	385,652
1953 Total	183,612	57,300	293,818
1954 Total	166,487	63,100	234,942
1955 Total	163,230	73,630	277,811
1956			
May	14,834	5,557	26,840
June	13,730	5,228	26,135
July	13,028	5,364	24,571
Aug.	14,559	5,425	25,453
Sept.	13,567	4,628	23,785
Oct.	17,439	4,815	26,607
Nov.	15,604	4,566	25,279
Dec.	15,513	4,160	24,411
1957			
Jan.	18,586	4,916	25,864
Feb.	15,989	4,658	25,200
Mar.	17,834	5,156	27,430
Apr.	18,245	4,912	27,598
May	17,066	1,744	27,250
June	16,981	2,855	24,685
July	15,391	2,679	23,779
Aug.	17,078	1,858	22,363
Sept.	14,111	187	19,390

*Includes Alaskan output in some months.

Mine Production of Lead in United States

(U. S. Bureau of Mines)

	(In short tons)		
	Eastern States	Central States	Western States
Total U.S.*			
1952 Ttl.	11,252	150,302	228,607
1953 Ttl.	9,970	136,650	188,776
1954 Ttl.	8,608	138,940	169,804
1955			
Dec. 771	13,628	13,403	27,802
Ttl. 10,379	145,640	177,409	333,409
1956			
Apr. 1,028	11,948	16,729	29,705
May 1,091	12,497	16,387	29,975
June 897	11,492	17,092	29,481
July 749	11,459	15,761	27,969
Aug. 879	12,760	16,991	30,630
Sept. 868	10,632	15,915	27,415
Oct. 879	12,698	17,843	31,520
Nov. 862	10,779	16,862	28,503
Dec. 804	10,670	15,635	27,109
Ttl. 11,395	141,900	195,034	348,329
1957			
Jan. 1,002	12,513	16,714	30,229
Feb. 942	11,730	16,464	29,136
Mar. 968	11,875	18,022	30,865
Apr. 1,053	12,695	17,167	30,915
May 988	11,107	17,760	29,855
June 648	10,569	15,500	26,717
July 532	11,430	15,032	26,994
Aug. 674	11,168	15,654	27,496
Sept. 744	9,935	13,680	24,359

Mine Production of Gold in United States

(U. S. Bureau of Mines)
(In fine ounces)

	Eastern States	Western States	Alaska*	Total
1953 Ttl.	1,529	1,689,668	273,479	1,964,676
1954 Ttl.	1,731	1,577,216	252,794	1,831,741
1955 Ttl.	2,026	1,634,625	247,535	1,884,186
1956				
Mar. 198	134,421		55	134,674
Apr. 156	136,227		522	136,911
May 175	141,240		5,085	146,494
June 199	139,541		13,112	152,852
July 45	126,628		32,515	159,188
Aug. 178	136,812		45,529	182,519
Sept. 194	137,561		40,564	178,319
Oct. 194	130,665		35,901	166,760
Nov. 206	133,456		25,506	159,162
Dec. 178	129,139		5,506	134,817
Ttl. 1,998	1,607,930		204,300	1,814,228
1957				
Jan. 183	131,954		1,134	133,271
Feb. 153	124,555		1,495	126,203
Mar. 182	137,404		1,076	138,662
Apr. 168	130,116		97	130,381
May 165	137,953		5,839	143,957
June 204	129,196		11,457	140,857

* Alaska totals based on mint and smelter receipts.

U. S. Silver Production*

(A.B.M.S.)

	(In thousands of ounces; commercial bars, 0.999 fine, and other refined forms)		
	Dom.†	For.	Total
1952 Total	40,245	36,653	76,898
1953 Total	34,697	37,764	72,461
1954 Total	38,059	39,422	77,481
1955 Total	33,101	32,780	65,881
1956			
April	2,898	3,191	6,089
May	2,905	3,709	6,614
June	2,501	2,248	4,749
July	3,828	2,838	6,666
August	3,035	3,818	6,853
September	2,828	3,002	5,830
October	3,454	3,125	6,579
November	2,886	2,685	5,571
December	3,168	3,802	6,970
Total	38,157	40,160	78,317
1957			
January	2,997	2,877	5,874
February	2,925	2,876	5,801
March	3,360	3,166	6,526
April	3,735	2,807	6,542
May	2,486	1,388	3,874
June	3,386	2,880	6,266
July	2,859	3,452	6,311
Aug.	2,500	2,558	5,058
Sept.	2,937	3,263	6,200
Oct.	3,334	3,419	6,753

* The separation between silver of foreign and domestic origin on the basis of refined bars and other refined forms is only approximate.

† Includes purchases of crude silver by the U. S. Mint.

Mine Production of Recoverable Silver in United States

(U. S. Bureau of Mines)

	(In Fine Ounces)			
	Eastern States	Missouri	Western States	Alaska*
Total				
1953 Total	158,707	223,500	36,354,685	39,111
1954 Total	142,180	283,600	36,121,368	35,140
1955 Total	159,038	438,000	36,103,723	33,804
1956				
May	46,770	33,300	3,063,179	770
June	46,753	30,610	3,097,297	1,595
July	51,664	31,160	2,697,372	4,171
August	45,914	35,180	3,239,671	6,333
September	46,305	28,700	2,925,332	5,666
October	42,808	34,510	3,288,177	4,942
November	46,379	29,000	3,009,312	2,400
December	45,528	25,000	2,759,108	750
Total	553,982	377,200	36,169,267	26,700
1957				
January	47,538	19,400	3,156,768	175
February	46,433	18,660	3,045,754	345
March	44,845	18,700	3,361,932	141
April	43,576	20,300	3,211,264	653
May	46,738	19,600	3,315,771	860

*Alaska totals based on mint and smelter receipts.

Production of Primary Aluminum in the U. S.

(U. S. Bureau of Mines)

	(In short tons)						
	1950	1951	1952	1953	1954	1955	1956
Jan.	50,023	67,954	76,934	89,895	116,247	128,203	140,394
Feb.	54,493	62,740	72,374	92,649	110,483	116,236	132,763
Mar.	58,747	70,022	77,069	104,460	122,339	130,272	145,895
Apr.	58,024	67,701	76,880	102,071	120,434	126,394	144,726
May	51,929	67,720	80,803	105,464	125,138	131,128	150,800
June	60,400	67,454	77,476	104,152	120,758	127,634	145,726
July	63,518	72,698	78,368	109,285	126,161	132,669	151,624
Aug.	63,006	73,816	85,175	110,545	125,296	133,551	152,406
Sept.	54,449	69,429	76,882	109,333	120,332	130,606	152,316
Oct.	62,915	72,647	77,312	108,219	125,089	134,655	149,125
Nov.	62,276	72,246	74,639	105,636	121,252	133,689	145,081
Dec.	65,897	72,454	83,419	110,291	127,056	140,748	148,391
Total	718,622	836,881	937,330	1,252,013	1,460,565	1,565,721	1,679,427

Average Silver Prices

	(Cents per fine ounce)			
	1954	1955	1956	1957
Jan.	85.25	85.25	90.357	91.375
Feb.	85.25	85.25	90.90	91.375
Mar.	85.25	85.25	91.138	91.375
Apr.	85.25	87.08	90.875	91.375
May	85.25	88.928	90.75	91.307
June	85.25	89.71	90.46	90.456
July	85.25	90.49	90.14	90.31
Aug.	85.25	90.75	90.614	90.909
Sept.	85.25	90.795	90.75	90.602
Oct.	85.25	91.794	90.722	90.625
Nov.	85.25	91.46	91.375	90.382
Dec.	85.25	90.45	91.375	
Ave.	85.25	89.116	90.79	

Note — The averages are based on the price of refined bullion imported on or after August 31, 1943.

METALS, DECEMBER, 1957

U. S. Copper Imports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	July	Aug.	Sept.
Ore, matte & regulus (cont.)	9,963	10,199	10,438
Canada	1,845	3,165	4,298
Mexico	472	555	509
Cuba	183	2,776	1,346
Argentina	...	...	11
Bolivia	102	584	389
Chile	1,483	1,330	1,821
Peru	1,038	1,017	1,186
Cyprus	2,195	...	...
Philippines	1,089	1	1
U. of S. Africa	1,556	675	876
Australia	...	71	...
Other countries	...	25	1
Blister copper (content)	27,729	26,824	20,557
Mexico	3,471	3,322	2,221
Chile	20,077	18,482	11,245
Peru	2,202	2,228	1,466
N. Rhodesia	980	...	1,113
U. of S. Africa	999	666	1,166
Turkey	...	2,126	1
Australia	...	...	3,345
Refined cathodes and shapes	14,386	10,212	10,486
Canada	6,985	6,867	5,608
Mexico	251	766	662
Chile	2,648	...	...
Peru	1,772	286	200
Germany (W.)	1	...	...
Sweden	...	...	224
Belg. Congo	364	613	599
N. Rhodesia	2,365	1,680	2,812
U. of S. Africa	...	...	381
Total Imports:			
Crude & refined	52,078	47,235	41,481
Old and scrap (content)	948	324	577
Composition metal (content)	12	...	...
Brass scrap & old (cu. cont.)	567	339	331

U. S. Copper Scrap Exports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	July	Aug.	Sept.
Copper scrap, unalloyed* (new and old)	4,210	1,509	1,015
Canada	127	...	...
France	279	68	...
Germany (W.)	683	287	265
Netherlands	83	104	16
U. Kingdom	...	...	50
India	...	...	14
Japan	2,920	927	625
Hong Kong	100	27	17
Other countries	18	96	28
Copper-base scrap, alloyed† (new & old)	5,875	3,157	1,879
Canada	10	...	1
France	433	378	...
Germany (W.)	1,575	1,053	498
Italy	191	136	314
Portugal	70	...	...
Spain	29	73	55
Switzerland	35	133	...
U. Kingdom	...	...	12
India	88	...	87
Japan	3,273	1,318	851
Hong Kong	160	66	28
Other countries	11	...	33

* Ash, brass mill, clippings, dross, flue dust, residues, scale, skimmings, wire scrap.
† Copper-base alloys, including brass and bronze — Ashes, clippings for remanufacture, cupro-nickel scrap, cupro-nickel trimmings, nickel silver scrap, phosphor bronze, phosphor copper, skimmings, turnings, round.

U. S. Copper Exports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	July	Aug.	Sept.
Ore, conc., matte & other unref. (content)	1,127	748	1,676
Refined ingots, bars, etc.*	24,420	23,435	27,057
Canada	205	561	569
Argentina	728	3,383	1,615
Brazil	435	360	1,522
Belgium	336	672	...
Denmark	6	...	...
France	7,736	1,891	4,153
Germany (W.)	3,993	3,179	4,029
Italy	1,222	2,793	3,546
Netherlands	224	224	487
Norway	...	...	560
Sweden	112	...	...
Switzerland	878	1,251	1,012
U. Kingdom	6,995	7,536	7,673
Yugoslavia	331	672	280
Formosa	...	107	...
India	472	336	530
Japan	702	450	1,074
Other countries	45	20	7
Total Exports:			
Crude & refined	25,547	24,183	28,733
Pipes and tubes	67	172	257
Plates and sheets	18	17	25
Rods	159	177	309
Brush-copper, castings, rolls, segments (finished forms) n.e.s.	8	12	16
Wire, bare	570	479	695
Building wire and cable†	152	333	293
Weatherproof wire†	5	86	27
Insulated copper wire n.e.s.	2,563	1,440	1,092

* Includes exports of refined copper resulting from scrap that was reprocessed on toll for account of the shipper.
† Gross weight; n.e.s.—not elsewhere specified.

U. S. Zinc Imports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	July	Aug.	Sept.
Zinc ore (cont.)	36,709	41,048	44,223
Canada	9,170	14,557	15,818
Mexico	16,196	15,101	16,709
Cuba	43	46	29
Guatemala	1,438	524	986
Honduras	577	101	148
Bolivia	42	481	1,487
Chile	...	347	...
Peru	8,122	5,695	4,974
U. of S. Africa	611	2,738	3,949
Australia	66	588	1
Philippines	13	691	...
Other countries	431	179	122
Zinc blocks, pigs, etc.	21,899	22,568	15,525
Canada	8,978	9,640	7,405
Mexico	1,044	1,671	2,590
Peru	3,213	1,942	2,275
Austria	...	...	110
Belgium	2,580	2,111	2,461
Germany (W.)	561	2,515	...
Italy	1,158	548	331
U. Kingdom	...	110	...
Yugoslavia	165	1,085	276
Belg. Congo	4,046	2,767	77
Japan	154	179	...

Total Imports:
Zinc ore, blocks, pigs . . . 58,608 63,616 59,748
Dross and skim. . . 23 28
Old & worn out . . 10 22 38

U. S. Zinc Exports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	July	Aug.	Sept.
Slabs, blocks, etc.	3,769	789	446
Mexico	...	69	39
Cuba	...	...	3
Brazil	...	17	...
Chile	28	...	...
Belgium	...	112	...
Netherlands	...	...	28
U. Kingdom	3,359	336	336
Korea	36	250	...
India	336	...	...
Other countries	10	5	40
Total Exports:			
Ore, conc., slabs, blocks	3,769	789	446
Scrap: Ashes, dross and skim.	158	756	432
Rolled in sheets, plates & strips†	299	194	206
Alloys ex brass and bronze	18	8	15
Die castings	64	47	100
Battery shells and parts, unassem.	18	5	3
Chromite zinc sheets, mold, castings, pattern plates, forms n.e.s.	12	12	47

† Includes photoengraving sheets and plates.

U. S. Lead Imports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	July	Aug.	Sept.
Ore, matte, etc. (content)	18,015	17,851	13,150
Canada	1,808	1,614	2,626
Mexico	285	306	411
Guatemala	843	866	614
Honduras	510	148	228
Argentina	111	119	588
Bolivia	1,439	2,195	1,298
Peru	6,161	5,358	4,379
U. of S. Africa	4,999	2,627	2,975
Australia	1,690	4,250	9
Philippines	139	36	...
Korea	...	232	...
Other countries	30	100	22
Base bullion (content)	59	...	25
Peru	59	...	25
Pigs and bars	25,224	23,162	23,042
Canada	3,086	3,113	2,325
Mexico	5,422	8,532	5,077
Peru	3,953	4,319	3,800
Denmark	76	...	81
France	...	...	55
Germany	...	110	441
Spain	...	...	308
U. Kingdom	...	...	56
Yugoslavia	3,031	1,533	4,907
Morocco	...	2,208	2,142
Australia	9,436	2,665	3,739
Other countries	220	682	111

Total Imports:
Ore, base bullion, refined . . . 43,298 41,013 36,217
Lead scrap, dross, etc. (cont.) . . . 423 1,258 961
Antimonial lead & typemetal . . . 157 455 442
Lead content thereof . . . 139 408 394

Comparative Metal Prices

	Av. 1939	Av. 1946	1957
Copper, Domestic (Electro., Del. Valley)	11.20	14.375	25.50-27.00
Lead (N. Y.)	5.55	8.25	13.00
P. W. Zinc (E. St. Louis, f.o.b.)	5.05	5.05	10.00
New York, del.	...	...	10.50
Tin, Spot Straits, N. Y.	...	...	92.875
Aluminum Ingot 99%+	20.00	15.00	28.10
Antimony (R.M.M. brand, f.o.b. Laredo)	12.36	14.50	33.00

World Production of Copper (American Bureau of Metal Statistics) (In Tons of 2,000 Pounds)

	United States	Canada	Mexico (crude)	Chile	Peru	Fed. Rep. of Germany	Norway	United Kingdom	Yugoslavia	India	Japan	Turkey	Australia	Northern Rhodesia	Union of South Africa
	(a)	(b)	(c)	(d)	(d)	(e)	(f)	(g-h)	(c)	(f-h)	(a)	(f)	(c)	(e)	(d)
1951 Total	964,539	269,971	60,511	396,937	25,495	234,647	.....	.....	.....	.....	100,254	.....	16,984	349,667	36,164
1952 Total	961,886	258,868	60,874	422,498	22,640	206,747	11,206	163,963	36,176	7,009	104,060	2,546	21,119	336,833	87,489
1953 Total	957,318	253,652	63,389	371,742	25,803	233,330	13,306	108,604	34,381	5,709	100,381	26,641	37,080	382,834	39,341
1954 Total	963,721	302,984	69,030	372,814	29,233	258,259	14,305	152,858	33,394	8,274	117,371	27,727	42,241	386,577	43,153
1955 Total	1,036,702	326,599	61,583	447,288	35,478	286,805	14,876	138,271	31,151	8,432	124,908	26,313	41,935	350,302	47,176
1956 Aug.	91,282	28,719	5,357	44,202	2,523	24,006	1,251	6,733	3,323	782	12,443	1,584	4,841	33,720	4,715
Sept.	88,659	31,196	5,609	41,475	.....	24,022	1,510	11,281	3,028	785	12,015	2,298	4,207	26,917	4,307
Oct.	95,109	29,977	6,488	47,346	.....	24,405	1,733	11,127	3,020	757	12,477	2,754	4,497	42,381	4,868
Nov.	90,573	29,537	5,871	46,407	.....	22,156	1,344	11,426	2,733	702	10,648	2,717	5,252	38,800	4,170
Dec.	92,231	30,422	5,521	44,911	838	21,989	1,293	9,174	2,687	786	11,993	2,064	4,777	38,892	4,299
1957 Jan.	94,873	26,053	5,592	44,697	2,276	21,990	1,399	11,528	2,697	440	12,493	1,565	4,047	36,360	3,744
Feb.	92,508	29,033	4,630	41,890	3,131	20,736	956	11,178	2,586	768	12,599	1,455	4,088	35,251	3,392
Mar.	96,363	30,521	5,688	42,596	3,255	24,554	931	11,651	3,123	850	12,116	3,011	4,688	43,471	3,671
Apr.	98,910	27,917	5,139	31,761	2,559	23,515	1,635	7,853	3,049	810	8,860	3,057	5,029	37,605	.....
May	96,334	26,640	5,421	38,769	4,122	23,795	1,608	12,998	3,194	810	13,479	2,995	5,036	44,471	4,151
June	95,893	26,841	5,107	40,362	4,987	21,816	1,455	7,991	3,272	787	13,930	2,017	3,021	37,874	3,839
July	96,141	26,349	5,961	40,351	5,839	24,170	1,418	11,492	3,096	774	14,585	961	.....	31,450	3,305
Aug.	89,690	29,931	5,144	36,744	4,005	24,709	1,649	5,926	.....	718	14,667	1,737	.....	29,112	.....
Sept.	87,270	30,076	4,960	32,822	4,270	24,654	.....	12,237	.....	757	14,448	.....	.....	42,871	.....
Oct.	92,789	.....	6,140	.....	3,000	.....	.....	.....	.....	.....	.....	.....	.....	43,123	.....

(a) Reported by Copper Institute. Crude, "recoverable contents of mine production or smelter production or shipments, and custom intake". Does not include intake of scrap nor of imported ore except that received from Cuba and Philippines. (b) Bilateral copper plus recoverable copper in concentrates, matte, etc., exported. (c) Crude copper, i. e., copper content of blister or converter copper as originally produced in the several countries, although some of it may be refined at home; e. g., in Rhodesia. (d) Blister and/or refined. (e) Refined. There are quantities of scrap included in the electrolytic production in addition to that reported, tonnage of which is not obtainable. (f) Smelter production. (g) Refinery production from imported blister only. (h) British Bureau of Non-Ferrous Metal Statistics. *Refined.

World Production of Refined Lead (American Bureau of Metal Statistics) (In Tons of 2,000 Pounds)

	United States	Canada	Mexico	Peru	Belgium	France	Fed. Rep. of Germany	Italy	Spain	Yugoslavia	Japan	Australia (a)	French Morocco	Tunisia	Rhodesia	Total
1951 Total	486,874	162,712	219,952	48,824	77,873	52,831	170,766	39,683	46,460	.....	18,516	217,301	20,287	25,476	15,646	1,602,601
1952 Total	532,778	182,389	248,551	53,536	82,139	59,607	152,751	38,504	46,060	74,053	20,382	217,298	31,224	28,264	14,112	1,783,648
1953 Total	530,833	166,356	225,975	66,820	84,162	60,887	164,077	40,786	53,799	78,038	25,513	241,419	29,970	30,397	12,891	1,812,778
1954 Total	551,618	146,379	231,895	63,735	79,260	71,083	162,773	41,150	62,475	72,555	37,612	260,424	29,417	30,915	16,800	1,877,841
1955 Total	547,153	148,811	221,138	67,303	91,241	73,251	162,508	46,806	67,509	83,347	40,912	254,558	28,870	28,620	17,976	1,893,125
1956 Aug.	48,404	12,196	18,890	6,192	9,872	1,896	11,686	2,440	4,724	7,546	4,126	19,757	4,151	1,933	1,490	155,065
Sept.	53,530	12,706	18,567	6,378	9,213	6,071	13,671	2,833	5,962	6,182	4,614	23,654	3,630	2,970	1,344	172,783
Oct.	54,815	13,923	20,169	2,237	9,243	7,212	16,873	4,600	6,002	8,237	4,271	26,243	2,490	2,389	1,490	181,423
Nov.	50,744	12,914	17,934	.....	9,312	7,883	17,679	3,319	5,343	7,632	4,494	23,220	.....	2,180	1,232	165,282
Dec.	54,062	12,531	17,088	5,787	9,540	1,797	17,094	3,667	5,113	7,747	4,985	22,263	1,948	2,724	1,344	169,392
1957 Jan.	50,854	10,117	19,212	5,676	9,971	8,084	16,540	3,196	5,389	6,195	4,928	21,498	4,052	1,261	1,344	169,640
Feb.	48,012	10,192	18,574	5,736	9,969	7,970	14,516	3,519	3,980	6,213	4,863	17,060	3,759	2,544	1,323	159,984
Mar.	52,357	12,727	17,873	6,431	9,906	8,103	16,420	3,574	6,031	8,643	4,464	18,515	2,215	2,817	1,120	172,730
Apr.	56,170	12,436	20,235	5,915	9,359	7,624	17,559	3,408	6,235	7,515	3,416	18,127	2,047	1,733	1,400	174,593
May	51,718	13,172	13,942	5,355	9,766	8,890	17,424	3,275	.....	6,610	5,477	25,268	2,211	2,490	1,400	173,726
June	48,203	12,406	8,324	6,083	9,722	7,809	13,902	3,537	4,932	6,775	4,829	21,847	2,392	1,997	1,456	156,657
July	47,100	12,098	15,831	6,768	8,083	7,396	16,315	4,000	5,893	6,687	4,786	22,242	3,113	2,270	1,456	164,802
Aug.	48,191	.....	26,341	7,258	7,961	7,443	15,408	2,869	6,124	4,786	.....	23,548	2,477	1,903	1,456	.....
Sept.	50,436	.....	20,151	6,553	.....	7,768	15,938	4,178	5,866	.....	5,366	.....	2,463	1,821	1,456	.....
Oct.	52,041	.....	18,627	6,323	.....	.....	.....	6,586	.....	.....	.....	.....	.....	.....	1,456	.....

(a) Production credited to Australia includes lead refined in England from Australian base bullion.

World Production of Slab Zinc (American Bureau of Metal Statistics) (In Tons of 2,000 Pounds)

	United States	Can.	Mexico	Peru	Belgium	France	Fed. Rep. of Germany	Great Britain	Italy	Netherlands	Norway	Spain	Yugoslavia	Japan	Australia (a)	Rhodesia (b)	Total
	(a)	(b)	(b-c)	(b-c)	(a)	(a)	(a)	(a)	(a)	(a)	(b)	(a)	(a)	(a)	(a)	(b)	(d)
1951 Total	931,833	218,548	87,990	1,003	220,479	82,184	155,024	78,101	52,058	24,924	44,971	23,444	.....	62,109	88,103	25,801	2,065,216
1952 Total	961,420	228,140	61,486	5,491	205,909	88,255	162,272	76,981	60,438	28,555	48,061	23,329	15,943	77,203	97,931	25,687	2,141,688
1953 Total	971,191	247,707	59,589	9,819	213,215	89,218	163,430	81,436	65,730	27,721	42,666	24,152	16,037	86,833	101,008	28,370	2,228,917
1954 Total	868,242	218,910	60,477	16,982	234,896	122,248	184,806	90,987	74,356	28,686	48,768	25,109	15,040	112,292	117,066	29,736	2,248,501
1955 Total	1,031,018	257,008	61,879	18,943	233,623	123,623	197,024	90,917	77,761	31,203	49,724	26,244	15,175	122,965	113,221	31,248	2,534,457
1956 Aug.	89,549	21,354	5,154	1,427	20,996	10,846	17,633	9,925	6,995	2,543	4,826	1,915	1,420	12,385	10,032	2,464	221,801
Sept.	90,235	20,691	5,018	.....	21,207	10,210	17,187	9,130	6,817	2,452	4,487	1,918	1,287	12,674	9,866	2,744	220,868
Oct.	93,493	21,412	5,257	.....	21,153	8,871	17,428	6,773	7,334	2,718	4,743	2,110	1,244	13,497	10,171	2,800	224,159
Nov.	91,808	20,470	5,060	.....	21,044	9,257	16,851	6,443	7,037	2,727	4,538	2,087	1,414	12,717	9,810	2,716	219,916
Dec.	92,234	22,012	5,291	880	21,816	10,088	17,835	8,135	7,249	2,745	4,654	2,151	1,425	11,819	10,257	2,856	233,020
1957 Jan.	93,452	20,340	5,357	1,560	22,466	11,464	17,700	6,360	6,944	2,922	4,424	1,896	2,734	11,361	10,166	2,856	228,017
Feb.	88,078	19,808	4,788	2,346	22,354	10,571	15,903	6,256	6,186	2,532	3,851	1,694	2,447	10,632	9,130	2,520	213,521
Mar.	96,924	21,942	5,334	2,352	22,486	12,249	17,627	8,537	6,719	2,820	4,478	2,124	2,326	9,754	10,114	2,352	234,556
Apr.	96,506	20,504	5,129	2,380	22,263	12,112	16,903	8,802	7,174	2,647	4,252	2,009	2,561	9,546	10,037	2,744	234,011
May	96,855	20,565	5,219	2,650	23,119	17,700	17,108	7,345	7,069	2,861	4,468	1,836	2,748	14,213	10,306	2,800	238,011
June	90,719	19,929	5,011	2,701	21,695	12,498	16,521	8,829	7,110	2,646	4,473	1,753	2,639	13,875	8,355	2,800	225,611
July	85,779	20,062	5,263	3,078	20,176	12,511	16,615	7,236	7,178	2,629	4,690	2,049	2,752	14,245	12,229	2,856	.....
Aug.	84,166	20,305	5,144	3,233	19,391	12,387	16,617	7,272	7,029	2,641	4,378	2,143	.....	14,008	10,675	2,856	.....
Sept.	77,455	20,247	5,090	3,000	.....	10,631	16,489	7,100	6,954	2,698	4,476	1,911	.....	13,753	.....	2,800	.....
Oct.	81,492	20,892	5,351	2,892	.....	.....	.....	7,292	.....	.....	4,419	.....	.....	.....	.....	2,856	.....

(a) Partially electrolytic. (b) Entirely electrolytic. (c) Beginning 1954 both electrolytic and electrothermic. (d) The above totals omits production in Russia, Czechoslovakia, Poland and in Argentina.

U. K. Virgin Copper Stocks

(In long tons)

British Bureau of Non-Ferrous Metal Statistics

At start of:	1955	1956	1957
Jan.	61,480	76,197	59,614
Feb.	62,771	79,377	59,203
Mar.	70,185	71,634	62,120
Apr.	67,566	73,776	61,779
May	60,767	76,481	71,101
June	58,546	71,713	61,991
July	64,256	76,188	64,121
Aug.	99,628	68,197	81,146
Sept.	107,261	72,069	98,595
Oct.	93,681	62,327	100,815
Nov.	75,533	58,893	90,877
Dec.	77,749	55,838	.....

U. K. Refined Lead Stocks

(British Bureau of Non-Ferrous Metal Statistics)

(In long tons)

At start of:	1955	1956	1957
Jan.	31,173	40,987	39,420
Feb.	32,274	34,326	41,433
Mar.	39,461	29,693	36,900
Apr.	37,587	33,974	34,877
May	45,226	29,479	44,933
June	38,760	30,537	40,804
July	30,816	37,088	42,148
Aug.	32,270	35,432	48,275
Sept.	48,036	35,793	51,435
Oct.	42,912	39,391	45,301
Nov.	42,061	32,662	50,371
Dec.	38,410	32,025	.....

U. K. Stocks of Zinc

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

Virgin Zinc Zinc Conc.

At start of:	1955	1956	1956	1957
Jan.	49,962	44,816	54,447	53,274
Feb.	45,239	40,501	49,537	63,366
Mar.	44,288	38,927	48,667	59,957
Apr.	49,194	41,260	40,502	55,698
May	49,129	37,540	36,524	52,871
June	47,266	36,000	40,136	49,646
July	47,644	37,384	40,763	55,900
Aug.	49,169	35,561	47,972	52,588
Sept.	51,946	44,207	57,125	59,028
Oct.	50,978	41,255	55,354	65,347
Nov.	47,364	42,095	54,376	67,828
Dec.	46,364	.....	55,223	.....

U. K. Copper Exports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

Aug. Sept. Oct.

(Gross Weight)	Aug.	Sept.	Oct.
Copper			
unwrought —			
ingots, blocks,			
slabs, bars, etc.	811	1,252	1,213
Plates, sheets,			
rods, etc.	2,334	1,245	2,019
Wire (including			
uninsulated			
electric wire) ..	3,784	1,916	5,239
Tubes	1,056	1,045	1,198
Other copper,			
worked (incl.			
pipe fittings) ..	93	39	78
Total	8,078	5,497	9,747

Copper Consumption in United Kingdom

British Bureau of Non-Ferrous Metal Statistics

(In tons of 2,240 pounds)

	Unalloyed	Alloyed*	Total	Virgin	Scrap
1953 Total	243,717	192,337	447,260	322,311	124,949
1954 Total	328,149	251,989	580,138	448,413	131,725
1955 Total	377,576	281,953	659,529	496,467	163,062
1956					
July	31,752	19,316	51,066	39,149	11,919
August	24,426	14,434	38,860	30,065	8,795
September	35,203	19,584	54,787	45,807	8,980
October	36,824	21,275	58,099	47,814	10,285
November	38,244	21,142	59,386	47,144	12,242
December	29,927	17,437	47,364	38,505	8,859
Total	388,167	251,312	639,479	500,794	138,685
1957					
January	40,014	21,574	61,588	51,118	10,470
February	36,191	19,849	56,040	43,326	12,714
March	33,537	19,895	53,432	42,787	10,645
April	33,744	18,124	51,868	40,940	10,928
May	36,721	21,395	58,116	44,740	13,376
June	32,922	18,332	51,254	39,756	11,498
July	32,049	19,388	51,437	38,441	12,996
August	24,606	14,834	39,440	30,583	8,857
September	35,404	19,666	55,070	43,883	11,187
October	38,044	22,004	60,048	49,638	10,410

*Includes copper sulphate effective October, 1954.

U. K. Zinc Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

Aug. Sept. Oct.

(Gross Weight)	Aug.	Sept.	Oct.
Zinc ore			
and conc.	27,261	24,570	16,433
Zinc conc.	13,358	13,561	.....
Australia	9,195	9,781	.....
Canada	4,163	.....	.....
Burma .....	.....	1,189	.....
Turkey .....	.....	1,693	.....
Spain .....	.....	898	.....
Zinc and			
zinc alloys	16,621	7,842	13,752
N. Rhodesia ...	75	150	150
Australia	500	.....	.....
Canada	8,074	4,304	7,150
Belgium	1,206	1,001	1,512
Germany (W.) ..	1	3	1
Netherlands	100	115	25
Norway	100	.....	100
United States ..	3,225	460	500
Other countries	3,340	1,809	4,314
Of which:			
Zinc or spelter,			
unwrought in			
ingots, blocks,			
bars, slabs and			
cakes	16,623	7,842	13,752

Zinc Imports and Exports By Principal Countries

(A.B.M.S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted.

	July	Aug.	Sept.
IMPORTS			
U. S. (s.t.)	21,899	22,568	.....
Canada (s.t.) ...	5	.....	.....
Denmark	333	404	366
France	967	840	1,186
Germany, W.* ..	5,217	6,016	.....
Italy	589	.....	.....
Netherlands	669	1,012	.....
Sweden	928	1,962	.....
Switzerland* ...	1,058	1,271	1,356
U. K. (l.t.)	10,778	16,621	7,842
India† (l.t.)	6,223	2,739	.....
EXPORTS			
U. S. (s.t.)	3,769	789	.....
Canada (s.t.) ...	12,912	20,520	.....
Denmark	9	.....	15
France	52	10	.....
Germany, W.* ..	3,188	1,447	.....
Italy	1,168	.....	.....
Netherlands	926	322	.....
Norway	1,725	3,804	.....
Switzerland* ...	437	161	643
U. K.† (l.t.)	476	214	331
Northern			
Rhodesia† (l.t.)	2,422	2,641	2,616
Australia† (l.t.)	314	.....	.....

* Includes scrap.

† Includes manufactures.

British Bureau of Non-Ferrous Metal Statistics

United Kingdom Tin Statistics

(British Bureau of Non-Ferrous Metal Statistics)

Tin Content of Tin in Ore

	Imports	Production*	Stock at end of period*	Imports	Production*	Tin Metal Consumption	Exports & Re-exports	Stock at end of period
1955 Total	27,084	1,034	2,181	1,227	27,241	22,390	8,924	2,999
1956								
August	2,691	48	2,713	20	1,931	1,577	533	3,784
September	934	83	1,277	247	2,575	1,903	1,153	3,274
October	3,396	101	2,561	73	2,272	2,223	953	2,737
November	2,034	88	2,308	445	2,293	1,997	511	3,436
December	2,305	91	2,393	131	2,118	1,649	686	3,175
1956 Total	26,571	1,044	2,393	2,226	26,434	22,232	8,371	3,175
1957								
January	3,584	105	3,359	25	2,519	2,134	863	2,878
February	2,468	80	2,812	25	2,688	1,936	800	3,169
March	4,342	85	4,689	66	2,835	1,878	863	3,450
April	2,192	87	3,952	379	2,074	1,752	576	3,281
May	3,019	89	3,637	111	3,564	2,240	896	4,043
June	2,689	90	3,223	158	2,735	1,799	693	4,692
July	2,743	116	3,200	69	2,576	1,862	560	5,332
August	2,305	.....	.....	483	2,740	1,368	671	6,320
September	4,291	.....	4,070	527	2,260	1,836	431	6,308

*As reported by International Tin Study Group. Production of Tin Metal includes production from imported scrap and residues refined on toll. Stocks exclude strategic stock but include official warehouse stocks.

Canada's Copper Output

(Dominion Bureau of Statistics)

(Refined Copper)				
(In Tons)				
1954	1955	1956	1957	
Jan. ..15,001	22,600	26,653	25,469	
Feb. ..13,954	21,455	26,229	21,861	
Mar. ..21,075	25,083	26,750	27,664	
Apr. ..20,412	24,077	26,617	27,398	
May ..23,012	23,840	27,626	29,086	
June ..23,344	21,890	27,122	24,093	
July ..21,582	21,185	27,250	27,195	
Aug. ..22,000	26,184	29,219	26,943	
Sept. ..22,684	24,752	27,950	24,634	
Oct. ..21,661	25,546	29,696	....
Nov. ..22,981	25,213	27,346	....
Dec. ..24,935	27,172	28,716	....
Year	252,643	288,987	331,174	....

Canada's Lead Exports

(Dominion Bureau of Statistics)

(In Pigs)				
(In Tons)				
1954	1955	1956	1957	
Jan. .. 6,170	5,500	4,888	8,946	
Feb. .. 7,560	11,882	3,856	6,633	
Mar. ..11,092	10,318	4,007	7,044	
Apr. .. 9,606	11,967	7,636	7,314	
May ..11,483	6,416	7,214	9,676	
June ..12,018	9,897	6,632	7,210	
July ..13,152	8,341	9,696	4,682	
Aug. .. 8,646	4,884	4,713	6,416	
Sept. ..10,045	5,538	9,908	8,467	
Oct. .. 8,005	8,053	9,072	....
Nov. ..10,817	4,622	9,227	....
Dec. .. 7,815	5,286	2,734	....
Year	116,406	92,407	79,633	....

Canada's Silver Exports

(Dominion Bureau of Statistics)

(In ores and concentrates)			
(Fine Ounces)			
1955	1956	1957	
Jan. 429,704	435,047	253,940	
Feb. 457,261	196,803	380,463	
Mar. 411,597	328,857	521,849	
Apr. 493,578	348,838	431,646	
May 445,054	447,710	523,228	
June 592,238	495,742	468,559	
July 285,350	686,209	844,545	
Aug. 644,932	1,080,301	811,530	
Sept. 636,992	481,042	861,857	
Oct. 684,301	731,099	....
Nov. 387,147	669,285	....
Dec. 405,719	1,023,481	....
Year	5,873,873	6,924,414	....

Canada's Copper Exports

(Ingots, bars, slabs and billets)

(In Tons)				
1954	1955	1956	1957	
Jan. .. 9,081	11,078	15,981	20,582	
Feb. .. 8,385	12,897	11,041	16,272	
Mar. ..11,671	12,423	12,276	14,720	
Apr. ..11,218	10,321	14,476	16,417	
May ..18,407	10,911	12,851	19,048	
June ..14,877	13,387	10,985	10,826	
July ..15,467	12,674	13,599	18,621	
Aug. ..14,158	13,219	14,710	21,980	
Sept. ..14,069	13,479	17,268	14,314	
Oct. ..11,528	14,208	13,896	....
Nov. ..13,372	14,545	19,130	....
Dec. ..13,897	14,057	18,630	....
Year	156,130	153,199	174,843	....

Canada's Zinc Output

(Dominion Bureau of Statistics)

(Refined Zinc)				
(In Tons)				
1954	1955	1956	1957	
Jan. ..17,155	22,028	21,696	20,340	
Feb. ..15,199	19,865	20,356	19,808	
Mar. ..16,550	22,215	22,010	21,941	
Apr. ..16,249	21,301	21,339	20,504	
May ..16,530	21,599	21,790	20,564	
June ..17,017	20,565	20,780	19,928	
July ..17,917	21,769	21,691	20,061	
Aug. ..18,755	22,029	21,354	20,305	
Sept. ..18,023	20,898	20,691	20,247	
Oct. ..18,871	22,206	21,412	....
Nov. ..19,662	21,398	20,470	....
Dec. ..21,922	21,135	22,012	....
Year	213,810	257,008	255,601	....

Canada's Silver Output

(Dominion Bureau of Statistics)

(In Ounces)			
1955	1956	1957	
Jan. 2,182,386	2,280,575	2,132,011	
Feb. 1,960,506	2,094,467	2,010,242	
Mar. 2,413,591	2,296,648	2,316,620	
Apr. 2,304,287	1,759,384	2,196,952	
May 2,235,620	2,463,374	2,078,278	
June 2,461,675	2,494,748	2,172,435	
July 2,385,654	2,267,271	2,324,624	
Aug. 2,480,607	2,315,312	2,471,326	
Sept. 2,386,385	2,517,451	2,727,438	
Oct. 2,371,890	2,379,162	....
Nov. 2,088,991	2,429,547	....
Dec. 2,388,627	2,357,202	....
Year	27,696,319	27,655,141	....

Canada's Lead Output

(Dominion Bureau of Statistics)

(Recoverable Lead)*				
(In Tons)				
1954	1955	1956	1957	
Jan. ..17,716	18,959	16,002	14,032	
Feb. ..16,863	15,018	14,344	15,170	
Mar. ..17,104	19,113	16,857	16,940	
Apr. ..19,452	17,889	11,573	14,275	
May ..19,953	16,808	15,446	14,591	
June ..18,988	17,800	18,145	16,431	
July ..19,164	16,650	15,841	14,377	
Aug. ..18,237	16,676	16,104	14,642	
Sept. ..17,066	15,972	15,760	15,813	
Oct. ..16,569	13,658	16,725	....
Nov. ..18,365	15,182	14,865	....
Dec. ..19,093	17,857	16,056	....
Year	192,280	201,583	188,971	....

* New base bullion from Canadian ores plus recoverable lead in ores or concentrates shipped for export.

Canada's Zinc Exports

(Dominion Bureau of Statistics)

(Slabs in Tons)				
1954	1955	1956	1957	
Jan. ..16,625	22,181	15,550	19,304	
Feb. ..11,328	25,556	11,757	16,618	
Mar. ..18,199	20,178	8,822	14,923	
Apr. ..17,926	21,018	14,317	17,131	
May ..13,926	14,820	11,357	16,680	
June ..15,654	19,581	15,296	16,157	
July ..27,582	13,522	15,499	12,912	
Aug. ..14,934	16,581	13,070	20,520	
Sept. ..17,298	11,793	19,732	17,671	
Oct. ..13,064	19,836	20,792	....
Nov. ..16,224	14,164	21,411	....
Dec. ..23,277	14,607	16,125	....
Year	206,037	213,837	183,728	....

Canada's Nickel Output

(Dominion Bureau of Statistics)

(In Tons)				
1954	1955	1956	1957	
Jan. ..12,765	14,387	14,985	16,609	
Feb. ..11,874	13,375	14,997	15,027	
Mar. ..13,619	15,544	15,504	16,733	
Apr. ..13,015	15,011	14,431	15,347	
May ..13,458	15,352	15,203	16,225	
June ..13,269	14,835	14,492	15,425	
July ..12,901	14,530	15,125	15,698	
Aug. ..13,428	14,825	14,852	16,615	
Sept. ..13,521	13,734	14,530	15,444	
Oct. ..14,323	14,411	15,762	....
Nov. ..14,159	14,290	15,062	....
Dec. ..14,947	14,881	14,824	....
Year	161,279	175,173	178,767	....

METALS, DECEMBER, 1957

Canadian Copper Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1957		
	July	Aug.	Sept.
Ore, matte, regulus, etc. (content)	4,282	5,875	3,334
United States ..	2,666	4,691	2,005
Belgium	151	...	121
Germany (W.) ..	96	...	115
Norway	1,240	1,086	1,035
U. Kingdom	129	98	58
Ingots, bars, billets, anodes ..	18,621	21,980	14,314
United States ..	5,875	8,995	4,993
Brazil	275	275	...
Denmark .....	...	...	62
France	1,680	1,341	1,385
Germany (W.) ..	...	140	196
Italy	224	...	...
Sweden	841	673	677
U. Kingdom	9,549	9,127	6,606
India	113	1,426	273
Other countries ..	64	3	122
Total Exports:			
Crude & refined ..	22,903	27,855	17,648
Old and scrap ..	1,047	619	806
Rods, strips, sheet & tubing ..	789	1,067	589

Canadian Zinc Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1957		
	July	Aug.	Sept.
Ore (zinc content)	16,347	26,633	15,055
United States ..	9,695	11,377	15,055
Belgium	4,833	2,432	...
France	299	1,871	...
Germany (W.) ..	1,520	1,717	...
Norway .....	...	4,574	...
U. Kingdom .....	...	4,662	...
Slab zinc	12,912	20,520	17,671
United States ..	9,076	8,654	8,170
Italy	112	224	...
Netherlands ..	...	392	...
U. Kingdom	2,632	10,061	9,382
Korea .....	...	567	52
Hong Kong .....	...	118	67
India	1,092	504	...
Total Exports:			
Ore and slabs ..	29,259	47,153	32,726
Zinc scrap, dross, ashes ..	271	140	74
United States ..	33	50	38
Belgium	105	28	36
Netherlands ..	...	8	...
Japan	133	54	...

Canadian Lead Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1957		
	July	Aug.	Sept.
Ore (lead content)	8,570	2,595	7,731
United States ..	2,603	2,595	1,615
Belgium	3,659	...	3,125
Germany (W.) ..	2,308	...	2,991
Refined lead	4,683	6,416	8,466
United States ..	3,016	3,126	2,321
Venezuela .....	...	...	22
U. Kingdom	700	3,114	5,894
Japan	962	176	61
Other countries ..	5	...	168
Total Exports:			
Ore and refined ..	13,253	9,011	16,197
Pipe and tubing ..	2	...	8
Lead scrap .....	...	...	30

METAL, DECEMBER, 1957

Copper Imports and Exports By Principal Countries

(A.B.M.S.)

Reported in ingots, slabs, etc.; metric tons except where otherwise noted.

IMPORTS			
	1957		
	July	Aug.	Sept.
U. S. (blist., s.t.) ..	27,729	26,824	...
(ore, etc., s.t.) ..	9,963	10,199	...
(refined, s.t.) ..	14,386	10,212	...
Denmark	343	408	397
France (crude) ..	813	...	...
(refined)	18,010	15,182	9,450
Italy	6,925	...	...
Germany, W.	27,460	20,088	...
Netherlands	1,541	334	...
Norway .....	...	200	...
Sweden	3,413	3,624	...
Switzerland	1,980	1,821	3,067
U. K. (l.t.)	45,835	43,794	40,726
India (blister/- ref., l.t.)† ..	4,624	3,466	...
EXPORTS			
	1957		
	July	Aug.	Sept.
U. S. (ore and unref., s.t.) ..	1,127	748	...
(refined, s.t.) ..	24,420	23,435	...
Canada .....	...	...	...
(refined, s.t.) ..	18,621	21,980	...
Finland* .....	...	...	265
Germany, W.	4,106	4,169	...
Norway	1,453	1,016	...
Sweden	688	1,585	...
U. K. (l.t.)	1,627	811	1,252
No. Rhodesia (ref. & blist., l.t.)† ..	33,714	27,733	26,142

* Includes old.

† British Bureau of Non-Ferrous Metal Statistics.

U. K. Copper Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1957		
	Aug.	Sept.	Oct.
(Gross Weight)			
Copper and copper alloys ..	43,794	40,726	35,151
U. of S. Africa ..	...	351	...
N. Rhodesia	22,932	18,318	14,383
Canada	6,018	6,016	6,213
Germany (W.) ..	17	63	7
Norway	60	...	101
United States ..	8,318	6,709	7,672
Chile	5,225	8,725	6,125
Peru	335	276	370
Belg. Congo ..	250	250	250
Other countries ..	639	18	30
Of which:			
Electrolytic	31,107	25,344	22,308
Other refined ..	3,250	5,476	4,050
Blister or rough ..	9,318	9,764	8,576
Wrought and alloys ..	119	142	217
Total	43,794	40,726	35,151

Canada's Nickel Exports

(Dominion Bureau of Statistics)

(Refined, in oxides, matte, etc.)

	1957		
	(In Tons)		
January	14,421	15,121	14,260
February	13,915	13,940	9,974
March	13,564	16,219	14,958
April	16,083	14,448	18,671
May	14,761	14,729	18,351
June	16,296	16,403	14,539
July	13,929	11,079	14,181
August	14,861	18,470	14,966
September	14,638	13,849	14,160
October	13,589	12,800	...
November	13,073	14,084	...
December	14,749	15,594	...
Year	173,879	176,837	...

French Copper Imports

(A. B. M. S.)

(In metric tons)

	1957		
	Aug.	Sept.	Oct.
Crude copper for refining (blister, black and cement) .....	...	...	813
Belg. Congo .....	...	...	813
Refined	15,182	9,450	13,472
United States ..	6,884	1,320	3,908
Canada	1,420	2,174	...
Chile .....	...	...	3
Belgium	1,942	2,413	3,833
Germany (W.) ..	309	214	261
Norway	127	541	236
Sweden	127	333	394
U. Kingdom	121	125	25
Belg. Congo ..	2,952	1,023	2,703
Rhodesia-Nyasaland ..	1,300	1,204	2,109
Other countries ..	...	103	...

French Zinc Imports

(A. B. M. S.)

(In metric tons)

	1957		
	Aug.	Sept.	Oct.
Ore (gross weight)	24,474	26,308	20,071
Canada .....	...	3,517	...
Peru	2,313	...	...
Belgium .....	...	495	...
Finland .....	...	686	2,460
Greece	2,006	371	...
Italy	1,985	4,069	1,087
Spain	1,536	...	1,522
Yugoslavia .....	...	1,400	...
Algeria	7,501	5,124	5,756
Morocco	9,133	9,553	5,756
Tunisia .....	...	1,093	1,103
Australia .....	...	...	2,387
Slabs, bars, blocks, etc. ...	840	1,186	461
Belgium	490	1,009	355
Germany (W.) ..	240	20	...
Italy .....	...	157	...
Norway	110	...	100
Algeria .....	...	...	6

French Metal Exports

(A. B. M. S.)

(In metric tons)

	1957		
	Aug.	Sept.	Oct.
LEAD			
Ore (gross weight)	16	14	33
Pig lead	1,626	2,992	1,449
United States ..	50	250	25
Uruguay .....	...	1	...
Denmark	203	1,270	254
Germany (W.) ..	497	494	220
Sweden	102	...	406
Switzerland	765	405	510
U. Kingdom .....	...	508	...
Other countries ..	9	64	34
Antimonial lead ..	28	12	50
ZINC			
Slabs, bars, blocks, etc. ...	10	...	58

IT PAYS
to
ADVERTISE
in the
DAILY METAL REPORTER

Nonferrous Castings

MONTHLY SHIPMENTS, BY TYPE OF METAL
(Bureau of Census — Thousands of Pounds)

	Alu- minum	Copper	Mag- nesium	Zinc	Lead Die
1952 Total	518,979	1,009,910	34,857	408,353	20,941
1953 Total	658,022	990,496	34,517	521,253	20,444
1954 Total	607,764	834,557	25,572	474,741	18,396
1955 Total	833,058	1,011,748	27,892	781,254	21,045
1956					
April	67,880	90,679	3,140	58,274	1,910
May	65,786	89,188	3,021	52,205	1,919
June	58,189	78,921	2,949	47,775	1,883
July	52,955	60,926	2,810	42,227	1,551
August	61,507	77,619	3,059	52,321	2,112
September	62,503	72,109	3,079	46,340	1,004
October	74,209	81,049	3,442	65,450	2,208
November	69,741	72,866	2,892	64,972	1,788
December	67,333	65,198	2,794	58,111	1,483
Total	801,136	966,473	36,168	88,069	20,734
1957					
January	72,999	82,025	3,207	67,964	1,883
February	69,651	72,084	2,661	59,793	1,435
March	74,527	77,418	2,970	61,378	1,865
April	68,284	77,167	2,896	54,982	2,070
May	65,108	75,347	2,832	53,565	2,373
June	58,547	70,959	2,973	49,356	2,336
July	52,173	60,621	2,544	48,379	2,079
Aug.	55,735	71,233	2,315	49,829	2,165
Sept.	58,692	70,804	2,279	47,736	2,115

Copper Castings Shipments

BY TYPE OF CASTING
(Bureau of Census) (Thousands of Pounds)

	Total	Sand	Permanent	Die	All Other
1951 Total	1,197,443	1,075,437	69,883	12,516	39,607
1952 Total	1,009,910	910,862	63,865	8,259	26,924
1953 Total	990,496	888,369	61,316	10,077	30,734
1954 Total	834,557	751,804	48,849	6,480	27,394
1955 Total	1,011,748	907,852	63,041	8,541	31,408
1956					
April	90,679	81,333	5,835	722	2,789
May	89,188	80,155	5,398	751	2,854
June	78,921	70,260	5,052	755	2,854
July	60,926	55,027	3,193	506	2,280
August	77,619	70,479	3,805	904	2,431
September	72,109	64,887	3,930	929	2,363
October	81,049	73,058	4,104	1,120	2,767
November	72,866	65,022	4,114	1,057	2,673
December	65,198	57,929	3,769	971	2,529
Total	966,113	866,404	57,522	10,023	32,134
1957					
January	82,025	73,702	4,510	1,008	2,805
February	72,084	64,346	4,188	874	2,676
March	77,418	69,258	4,445	878	2,837
April	77,167	69,141	4,316	894	2,816
May	75,347	67,251	4,421	953	2,722
June	70,959	63,910	3,590	868	2,591
July	60,621	54,847	3,010	825	1,939
Aug.	71,233	64,953	3,278	799	2,203
Sept.	70,804	64,470	3,243	870	2,221

Nickel Averages

Electro, cathode sheets, 99.00%,
f.o.b. refinery, duty included
(Cents per pound)

	1954	1955	1956	1957
Jan.	60.00	64.50	64.50	74.00
Feb.	60.00	64.50	64.50	74.00
Mar.	60.00	64.50	64.50	74.00
Apr.	60.00	64.50	64.50	74.00
May	60.00	64.50	64.50	74.00
June	60.00	64.50	64.50	74.00
July	60.00	64.50	64.50	74.00
Aug.	60.00	64.50	64.50	74.00
Sept.	60.00	64.50	64.50	74.00
Oct.	60.00	64.50	64.50	74.00
Nov.	60.98	64.50	64.50	74.00
Dec.	64.50	64.50	72.48	....
Av.	60.46	64.50	65.165	....

Platinum Averages

N. Y. MONTHLY QUOTATIONS
(Dollars per Troy Ounce)

	1954	1955	1956	1957
Jan.	91.40	81.00	106.30	101.92
Feb.	91.00	78.16	104.34	98.59
Mar.	87.88	78.00	104.23	93.50
Apr.	85.50	77.94	103.92	93.45
May	85.50	77.50	105.23	92.865
June	85.50	78.33	106.50	92.02
July	85.50	81.78	106.50	90.265
Aug.	85.00	84.59	105.76	84.426
Sept.	85.50	91.96	105.50	84.00
Oct.	83.62	94.60	104.85	84.00
Nov.	81.07	103.11	104.50	83.80
Dec.	80.64	106.58	104.50	....
Av.	85.72	86.12	105.18	....

Spot Straits Tin

(Straits, Open Market, N. Y.)

	Monthly Average Prices			
	1954	1955	1956	1957
Jan.	85.125	87.268	105.036	101.511
Feb.	85.16	90.836	100.803	101.132
Mar.	92.457	91.161	100.786	99.643
Apr.	96.298	91.48	99.268	99.304
May	93.51	91.41	96.994	98.347
June	94.24	93.68	94.589	98.05
July	96.55	97.08	96.143	96.52
Aug.	93.381	96.521	99.049	94.261
Sept.	93.536	96.607	103.809	93.406
Oct.	93.225	96.20	106.023	91.848
Nov.	91.176	97.987	110.921	89.236
Dec.	88.571	108.02	104.268	....
Aver.	91.935	94.85	101.474	....

Prompt Tin Prices

(Straits, Open Market, N. Y.)

	Monthly Average Prices (Cents per pound)			
	1954	1955	1956	1957
Jan.	84.84	87.628	104.768	101.347
Feb.	85.04	90.75	100.586	100.257
Mar.	91.24	91.065	100.524	99.476
Apr.	96.238	91.41	99.145	99.286
May	93.51	91.38	96.853	98.335
June	94.24	93.64	94.488	98.025
July	96.55	96.825	96.131	96.44
Aug.	93.381	96.456	98.924	94.159
Sept.	93.536	96.256	103.559	93.313
Oct.	93.00	96.075	105.716	91.848
Nov.	91.099	97.882	110.329	89.236
Dec.	88.571	107.75	104.00	....
Av.	91.77	94.73	101.252	....

Quicksilver Averages

N. Y. Monthly Averages

Virgin, Dollars per 76-lb. Flask

	1954	1955	1956	1957
Jan.	189.60	324.68	277.88	256.00
Feb.	190.00	324.68	270.29	256.00
Mar.	201.63	322.61	261.40	256.00
Apr.	221.36	318.14	267.22	256.00
May	251.20	306.62	267.675	256.00
June	273.46	286.98	260.69	256.00
July	287.40	268.22	256.06	256.00
Aug.	290.71	255.18	256.00	252.20
Sept.	314.08	263.70	256.00	248.58
Oct.	329.50	279.02	255.92	234.48
Nov.	321.17	282.50	255.13	228.33
Dec.	319.96	282.27	256.00	....
Av.	265.84	292.90	261.71	....

METALS, DECEMBER, 1957

Primary Aluminum Output, Shipments and Stocks

	(U. S. Department of Interior)				
	Stocks beginning of month short tons	Production short tons	Sold or Used Short tons	Value f. o. b. plant	Stocks end of month short tons
1956					
November	62,290	145,081	119,787	60,252,640	87,584
December	87,584	148,391	133,186	67,039,743	102,789
Total		1,679,247	1,591,478		
1957					
January	102,496	147,029	104,394	52,418,766	145,131
February	145,131	119,059	97,886	49,173,176	166,324
March	166,324	135,706	141,529	71,240,311	160,501
April	160,501	139,152	123,549	61,932,877	176,104
May	176,104	145,174	126,152	63,352,473	195,126
June	195,126	138,007	140,277	70,379,484	192,856
July	192,856	142,041	155,531	77,905,184	179,366
August	179,366	143,449	129,839	65,509,199	192,976
September	192,976	129,278	147,169	75,823,527	175,085

Aluminum Wrought Products

PRODUCERS' MONTHLY NET SHIPMENTS
(Bureau of Census — Thousands of Pounds)

	Total	Plate, Sheet, & Strip	Rolled Structural Shapes, Rod, Bar & Wire	Extruded Shapes Tube Blooms & Tubing	Powder, Flake, & Paste
1954 Total	2,088,439	1,165,090	357,229	518,070	46,255
1955 Total	2,805,500	1,542,368	365,391	812,311	35,854
1956					
January	251,639	142,049	34,008	67,499	2,118
February	240,999	134,077	33,727	65,261	1,901
March	232,767	128,432	30,972	63,482	1,947
April	260,610	143,859	37,971	69,639	3,316
May	264,378	147,613	39,900	68,106	2,215
June	240,415	132,510	33,438	65,600	2,119
July	247,895	139,571	35,346	64,249	2,736
August	248,457	141,400	32,413	66,315	3,039
September	217,425	117,074	32,154	59,462	2,953
October	252,289	136,546	25,385	73,363	2,255
November	218,272	114,618	31,501	64,197	1,716
December	194,822	99,851	31,787	55,225	1,702
Total	2,870,101	1,577,601	398,602	782,398	28,017
1957					
January	234,805	126,008	35,911	64,227	1,970
February	206,397	109,786	30,330	58,296	1,927
March	229,786	120,077	34,365	66,400	2,190
April	238,212	126,755	34,805	68,284	2,572
May	249,012	130,047	35,680	74,364	2,670
June	227,388	117,103	32,847	69,411	2,630
July	249,047	130,624	39,342	71,339	3,120
August	223,786	117,796	30,918	66,829	3,224
September	215,564	122,787	21,735	63,421	2,802

Aluminum Castings Shipments

(Bureau of Census)

BY TYPE OF CASTING

	(Thousands of Pounds)				
	Total	Sand	Permanent Mold	Die	All Other
1951 Total	515,131	193,378	160,011	151,465	10,277
1952 Total	518,979	194,616	146,883	169,732	7,748
1953 Total	658,022	214,553	200,025	239,330	4,114
1954 Total	609,066	155,738	213,968	232,726	6,800
1955 Total	833,058	171,757	298,115	354,804	8,282
1956					
April	67,880	14,732	20,718	31,782	648
May	65,786	15,600	19,669	29,814	703
June	58,189	13,448	19,067	25,027	647
July	52,955	12,398	16,388	23,491	678
August	61,407	13,100	18,067	29,553	687
September	62,503	12,354	17,855	31,640	654
October	74,209	14,389	21,120	37,782	918
November	69,741	14,333	20,673	33,929	806
December	67,333	13,391	20,557	32,923	454
1956 Total	801,036	171,763	245,421	376,108	7,736
1957					
January	72,999	14,201	20,963	37,194	641
February	69,451	13,366	21,707	34,311	67
March	74,527	13,914	22,974	37,521	118
April	68,284	14,287	20,376	33,493	...
May	65,108	12,705	20,708	31,602	...
June	58,547	11,585	17,180	29,700	...
July	52,173	10,447	16,322	25,339	...
August	55,735	10,966	18,398	26,319	...
September	58,692	11,367	17,820	24,900	...

Virgin Aluminum

Virgin 99% Delivered
Monthly Average Prices
(Cents per pound)

	1954	1955	1956	1957
Jan. 21.50	22.90	24.40	27.10	
Feb. 21.50	23.20	24.40	27.10	
Mar. 21.50	23.20	24.60	27.10	
Apr. 21.50	23.20	25.90	27.10	
May 21.50	23.20	25.90	27.10	
June 21.50	23.20	25.90	27.10	
July 21.50	23.20	25.90	27.10	
Aug. 22.12	24.26	26.70	28.10	
Sept. 22.20	24.40	27.10	28.10	
Oct. 22.20	24.20	27.10	28.10	
Nov. 22.20	24.40	27.10	28.10	
Dec. 22.20	24.40	27.10	....
Av. 21.785	23.655	26.008	....

Magnesium Wrought Products Shipments

(Bureau of Census)

(Thousands of Pounds)

	1954	1955	1956	1957
Jan. .. 972	1,776	2,188	2,130	
Feb. .. 1,136	1,648	1,901	2,522	
Mar. .. 1,136	1,947	1,946	2,388	
Apr. .. 892	1,756	2,279	2,511	
May .. 1,129	1,836	2,462	2,230	
June .. 1,312	1,686	2,302	1,881	
July .. 1,032	1,437	2,002	1,428	
Aug. .. 1,111	1,742	2,523	1,540	
Sept. .. 1,183	2,159	2,031	1,501	
Oct. .. 1,002	1,667	861	....
Nov. .. 1,243	1,954	2,141	....
Dec. .. 1,673	1,577	2,452	....
Total .13,743	21,186	24,975	....

Cadmium Averages

N. Y. Monthly Averages

Cents per lb. in ton lots

	1954	1955	1956	1957
Jan. 200.00	170.00	170.00	170.00	
Feb. 170.00	170.00	170.00	170.00	
Mar. 170.00	170.00	170.00	170.00	
Apr. 170.00	170.00	170.00	170.00	
May 170.00	170.00	170.00	170.00	
June 170.00	170.00	170.00	170.00	
July 170.00	170.00	170.00	170.00	
Aug. 170.00	170.00	170.00	170.00	
Sept. 170.00	170.00	170.00	170.00	
Oct. 170.00	170.00	170.00	170.00	
Nov. 170.00	170.00	170.00	170.00	
Dec. 170.00	170.00	170.00	....
Av. 172.50	170.00	170.00	....

Steel Ingot Production

(American Iron and Steel Institute)

Period	Estimated Production —		All Companies		Calculated	
	OPEN HEARTH	PER CENT	BESSEMER	PER CENT	ELECTRIC	PER CENT
	Net tons of capacity		Net tons of capacity		Net tons of capacity	
1952 Total	82,846,439	87.2	3,823,677	65.6	6,797,923	82.6
1953 Total	100,473,823	97.9	3,855,705	83.2	7,280,191	71.1
1954 Total	80,327,494	78.6	2,548,194	53.2	5,486,954	52.0
1955 Total	105,342,886	95.6	3,319,088	69.3	8,338,592	77.2
1956 Total	1,890,151	12.9	.....	.....	292,013	39.5
July	7,213,274	75.6	189,564	46.6	719,769	75.3
August	9,342,796	101.2	286,978	72.9	792,885	85.7
September	9,841,002	103.2	330,101	81.2	877,410	91.8
October	9,430,248	102.2	295,827	72.5	829,925	89.6
November	9,695,919	101.6	308,465	75.9	833,161	87.1
December	102,840,585	91.6	3,227,997	67.4	9,147,567	81.2
1957	.....	.....	.....	.....	.....	.....
January	9,829,691	99.0	294,839	77.1	884,232	86.5
February	8,898,671	99.2	277,682	80.4	810,853	87.8
March	9,442,164	95.1	275,156	71.0	871,754	85.2
April	8,820,328	91.8	231,731	62.6	762,721	77.1
May	8,842,707	89.1	201,864	52.8	747,752	73.1
June	8,498,903	88.4	210,915	57.0	681,584	68.9
July	8,086,519	81.4	194,638	50.9	627,575	61.4
August	8,297,172	83.6	204,723	53.5	731,995	71.6
September	8,135,139	84.7	185,967	50.2	656,800	66.4
October	8,348,522	84.1	154,577	40.5	694,618	67.6
November	7,674,000	79.9	135,000	36.5	584,000	59.0

Steel Ingot Operations

(Percentage of Capacity as Reported by American Iron & Steel Institute)

Week	Beginning	1954	1955	1956	1957
Jan. 7...	75.4	81.2	97.6	98.4	
Jan. 14...	74.3	83.2	98.6	96.4	
Jan. 21...	74.1	83.2	99.0	96.6	
Jan. 28...	75.6	85.0	100.4	97.6	
Feb. 4...	74.4	85.4	99.3	97.1	
Feb. 11...	74.4	86.8	99.1	97.7	
Feb. 18...	74.6	89.1	98.8	97.8	
Feb. 25...	73.6	90.8	98.8	96.0	
Mar. 4...	70.7	91.9	99.9	94.2	
Mar. 11...	69.3	92.9	100.0	93.8	
Mar. 18...	67.6	94.2	100.6	93.5	
Mar. 25...	68.1	93.7	99.5	92.4	
Apr. 1...	69.1	94.4	99.6	90.6	
Apr. 8...	68.0	95.3	97.7	90.3	
Apr. 15...	68.0	94.6	100.9	90.4	
Apr. 22...	68.6	94.6	100.2	88.7	
Apr. 29...	68.7	95.6	100.5	87.0	
May 6...	69.4	96.6	96.4	86.7	
May 13...	70.9	97.2	95.2	84.2	
May 20...	71.8	96.9	95.3	86.4	
May 27...	71.2	96.4	97.3	88.0	
June 3...	70.2	95.8	96.3	87.5	
June 10...	73.2	94.7	96.7	86.5	
June 17...	72.3	96.0	93.4	85.2	
June 24...	72.1	95.0	93.0	84.0	
July 1...	65.8	71.1	84.9	78.5	
July 8...	60.0	85.9	12.3	78.7	
July 15...	64.3	91.2	12.9	79.3	
July 22...	65.3	91.0	14.6	79.4	
July 29...	64.2	90.7	17.0	79.4	
Aug. 5...	64.0	86.9	16.9	79.8	
Aug. 12...	64.0	89.4	57.5	80.6	
Aug. 19...	61.8	90.2	87.5	82.1	
Aug. 26...	63.5	90.6	95.8	82.2	
Sept. 2...	64.0	93.4	97.0	81.0	
Sept. 9...	63.0	93.8	98.7	81.9	
Sept. 16...	66.3	95.7	100.6	82.1	
Sept. 23...	68.7	96.1	100.6	82.2	
Sept. 30...	70.4	97.0	101.6	82.6	
Oct. 7...	71.0	96.7	101.8	82.2	
Oct. 14...	72.8	96.5	100.9	80.9	
Oct. 21...	73.6	98.9	101.4	80.2	
Oct. 28...	74.5	100.0	101.2	79.7	
Nov. 4...	76.4	99.4	101.3	78.0	
Nov. 11...	77.2	99.6	100.6	77.7	
Nov. 18...	79.3	99.2	100.2	76.0	
Nov. 25...	80.3	100.1	100.1	72.1	
Dec. 2...	81.4	97.6	101.1	71.5	
Dec. 9...	82.5	100.1	101.3	69.2	
Dec. 16...	81.5	100.3	102.0	....
Dec. 23...	72.4	96.9	94.3	....
Dec. 30...	77.6	95.7	97.3	....

Blast Furnace Output

(American Iron and Steel Institute)

	net tons			% Total Capacity
	Pig Iron	Ferro- manganese & Spiegel	Total Capacity	
1947				
Ttl. Yr.	58,507,169	702,561	59,209,730	92.1
1948				
Ttl. Yr.	60,135,941	712,899	60,848,840	90.1
1949				
Ttl. Yr.	53,613,779	592,564	54,206,343	76.9
1950				
Ttl. Yr.	64,810,272	678,896	65,489,168	91.6
1951				
Ttl. Yr.	70,487,380	745,381	71,232,761	93.3
1952				
Ttl. Yr.	61,528,068	629,926	62,158,991	84.3
1953				
Total ..	74,987,721	855,038	75,842,759	95.5
1954				
Total ..	58,119,882	668,736	58,688,117	71.6
1955				
July ...	6,389,288	61,164	6,399,859	88.8
Aug. ...	6,389,288	71,902	6,461,190	92.5
Sept. ...	6,389,288	49,788	6,439,076	97.3
Oct. ...	6,389,288	59,993	6,449,281	97.6
Nov. ...	6,389,288	62,341	6,451,629	97.0
Dec. ...	6,389,288	65,849	6,455,137	97.7
Total ..	77,114,073	668,736	77,800,811	92.7
1956				
Jan. ...	6,985,945	63,619	7,049,564	97.1
Feb. ...	6,985,945	65,618	7,051,563	97.1
Mar. ...	6,985,945	65,566	7,051,511	97.1
Apr. ...	6,985,945	65,566	7,051,511	97.1
May ...	6,985,945	65,566	7,051,511	97.1
June ...	6,985,945	65,566	7,051,511	97.1
July ...	6,985,945	65,566	7,051,511	97.1
Aug. ...	6,985,945	65,566	7,051,511	97.1
Sept. ...	6,985,945	65,566	7,051,511	97.1
Oct. ...	6,985,945	65,566	7,051,511	97.1
Nov. ...	6,985,945	65,566	7,051,511	97.1
Dec. ...	6,985,945	65,566	7,051,511	97.1
Total ..	75,301,134	664,341	75,965,475	88.9
1957				
Jan. ...	7,209,547	72,826	7,282,373	98.8
Feb. ...	6,596,133	61,973	6,658,106	100.0
Mar. ...	7,179,100	67,779	7,246,879	98.3
Apr. ...	6,810,102	60,784	6,870,886	96.3
May ...	6,879,881	65,566	6,945,447	94.2
June ...	6,593,326	66,266	6,659,592	93.3
July ...	6,825,901	66,031	6,891,932	90.8
Aug. ...	6,719,763	61,988	6,781,751	92.0
Sept. ...	6,569,074	58,837	6,627,911	92.9
Oct. ...	6,454,450	65,028	6,519,478	88.4

Steel Castings Shipments

(Bureau of Census)

	(Short Tons)		For Own Use
	Total	For Sale	Use
1950	1,461,667	929,192	374,217
1951	2,101,604	1,507,413	594,191
1952	1,925,116	1,476,352	448,767
1953	1,829,277	1,290,016	431,330
1954			
Total	1,184,096	880,158	303,938
1955			
July	97,875	71,170	26,705
Aug.	126,406	96,290	30,116
Sept.	140,843	107,622	33,221
Oct.	145,674	110,409	35,265
Nov.	152,381	116,908	35,473
Dec.	158,982	122,201	36,781
Total	1,530,694	1,166,706	363,988
1956			
Jan.	158,618	123,343	35,275
Feb.	165,398	128,598	36,800
Mar.	170,045	130,839	39,206
Apr.	163,708	125,015	38,693
May	178,227	142,025	36,202
June	164,661	129,147	35,514
July	117,984	96,350	21,634
Aug.	159,831	127,001	32,830
Sept.	155,046	121,705	33,341
Oct.	175,630	135,798	39,832
Nov.	164,114	126,900	37,214
Dec.	158,725	125,569	33,156
Total	1,931,987	1,512,290	419,697
1957			
Jan.	169,240	133,826	35,414
Feb.	154,932	121,667	33,265
Mar.	160,054	124,416	35,638
Apr.	162,498	124,549	37,949
May	164,575	125,431	39,144
June	153,647	119,353	34,294
July	122,018	90,037	31,981
Aug.	145,926	111,080	34,846
Sept.	139,002	105,611	33,391

Galvanized Sheet Shipments

(American Iron & Steel Institute)

Period	Net Tons		1957
	1954	1955	
Jan.	169,086	211,101	235,902
Feb.	167,433	199,408	205,048
Mar.	180,198	238,649	291,193
Apr.	203,312	239,061	266,728
May	201,671	235,962	272,741
June	200,456	246,940	279,058
July	214,349	205,211	167,247
Aug.	207,113	241,863	186,790
Sept.	209,765	260,959	256,803
Oct.	209,495	260,010	278,637
Nov.	195,190	255,692	255,135
Dec.	205,561	261,640	239,173
Tot. 2,362,632	2,864,497	2,957,991	

* Combined with August figures.

SHIPMENTS OF TIN-TERNEPLATE

(American Iron & Steel Institute)

Period	Net Tons		1957
	1954	1955	
Jan.	81,034	88,174	402,627
Feb.	77,877	83,040	404,193
Mar.	133,257	112,593	598,129
Apr.	138,556	130,037	554,575
May	70,282	34,292	354,204
June	84,371	32,783	466,060
July	.....	39,234	.....
Aug.	81,005	40,542	408,903
Sept.	72,400	36,983	396,588
Oct.	92,394	28,917	415,451
Nov.	70,510	325,408
Dec.	68,385	288,896
Tot. 950,070	4,615,068	

* Combined with August figures.

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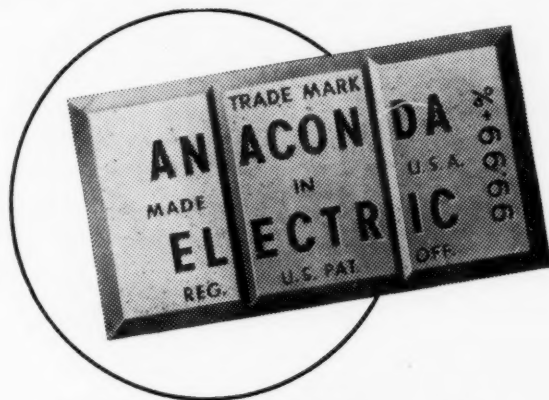
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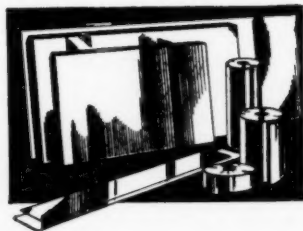
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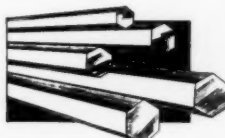
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